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Current Comment.

Too many fences are made and kept up," says *Vick's Magazine*. "They are expensive, they often harbor weeds, they are frequently a great disfigurement to the landscape, and in many cases useless. Still, there are localities where front fences, at least, cannot be wholly dispensed with. The question is one for each landholder to decide for himself, but he should decide it in accordance with the facts, and not with old usage or prejudice."

The fence question is being agitated in a lively manner at present. The *American Gardener* has set the ball to rolling this time, and it is to be hoped that the impetus given will be strong enough to keep the ball in motion until it has swept away one of the greatest evils of American agriculture.

Fence or no fence is indeed a lively and a timely question, and one closely related to another; namely, "Does farming pay?" How can farming on the high-priced lands of the East be expected to yield large returns so long as farmers continue to bear patiently so many unnecessary, self-imposed taxes, prominently among them the excessive fence tax.

Every farmer has some idea of the oppressiveness of the tax, but its absurdity will be brought vividly to mind by a careful view of a plain of fine farming lands cut up into small, irregular-shaped fields by numerous lines of fences running in every direction. This is a familiar sight in many parts of the East. It is plainly evident that thousands upon thousands of dollars are wasted in material for useless fences and in building and repairing them; hundreds of narrow strips of choice land, aggregating many acres, which might be kept in fine tilth and made to yield large crops, are producing briars and noxious weeds. How different is this from the farming, as American tourists find it, in some of the countries of Europe! There you may look over blooming fields as far as the eye can reach, with never a fence even to mark the dividing line between farms, and no stock, except, perhaps, the big flocks of sheep, or more rarely droves of cattle, guarded by the shepherd and his faithful dogs. Our style of fencing land and pasturing stock is out of place on our high-priced land, and advanced agriculture will not tolerate it much longer.

Farming will not pay unless it is made to pay by the adoption of business principles and the closest economy, which, of course, includes relief from all self-imposed taxes. Change your system of farming and do away with all fences, except those absolutely necessary. Save

the annual outlay of money for building and repairing fences. Save the land now occupied by them for its right purpose, the production of profitable crops; save the plant food now given to feed the weeds in the fence rows, and save the labor required to destroy the weeds, and save the time and labor lost in a dozen other ways by useless fences.

On high-priced lands the soiling system is greatly superior to the pasturing system. One acre in fodder will go as far as three or four in pasture, and the cost of cutting and taking fodder to the cattle-yards and stables is much less than that of keeping fences and running after stock.

No one has any reason to grumble about the few dollars of county and state taxes so long as he allows himself to be bled ten or twentyfold by the fence tax, which he imposes upon himself, and of which he can free himself at will. Down with the fences that are not needed and abolish an absurd and oppressive tax, which eats up the profits of farming.

Even where it is necessary to fence land into small fields for some special purpose, there is room for much improvement. The number of rods, and consequently the cost of building and maintaining fences, can be greatly reduced by arranging the fields in proper shape.

The simple illustrations in the poultry department of this issue show how this can easily be done. The principle illustrated can be applied to the whole farm as well as to poultry-yards. We do not mean to say that every farm should be divided into square fields, but the principle should be kept in plain view. In this day of close margins true economy in fencing alone may make the difference between profitable and unprofitable farming.

If the annual cost of building and repairing even such fences as are worse than useless, under an intelligent and economical system of farm management, could be judiciously applied for a few years to the improvement of our public highways, a vast amount of good would be done, and the investment would be a paying instead of a losing one. But we carelessly let the big waste go on and grumble about the road tax.

Good roads are a necessity. They are worth all they cost; they soon pay for themselves. It is said that the greater part of the people of this country do not fully realize the value of good roads because they never saw a real good one. However that may be, it is probable that few of them know that, according to the most careful estimates, it costs more to get the average bushel of grain to the railway station than from the station to the seaboard. Within recent years, railroad transportation of farm products has been cheapened greatly, but transportation over public roads very little. It is high time to cheapen the latter. This can be done, and must be done mainly by making the roads better. Producers pay the transportation charges, and they should be the ones most deeply interested in making the roads better.

The subject is being agitated, there is a good deal of interest in it, and improvements are going on, slowly, it is true. In this condition of the public mind, every-

thing of value on the subject is timely and acceptable.

The little pamphlet, entitled "Improvement of Highways," recently published for free distribution by the League of American Wheelmen, is capable of doing very effective missionary work in this line. It contains a series of practical articles on the making and care of good roads, and also a specimen road bill for the consideration of legislators. Any one interested in good roads may obtain a copy of this pamphlet by sending a stamp for return postage to the secretary of the league, Abbot Bassett, 12 Pearl street, Boston, Mass.

We have in mind some large tracts of land right in the midst of a fine grain-growing country that have always been mainly kept in grass. The soils vary from a stiff clay to a black loam, and are underlaid with a very deep clay subsoil. Being comparatively level, the drainage is bad and the most of this land is, therefore, naturally unsuited to grain growing. Some grain has always been grown in the more favorable portions, but the crops were uncertain, being almost entire failures in very rainy seasons. Consequently, the main industry of this section of the country has been stock raising. But within the past few years a good deal of ditching and tiling has been done in that section, and a very marked improvement made in the character of the land. Wherever the land has been properly and thoroughly drained, fine crops of grain are now grown. Now, the point to which special attention is called is that this land, which is naturally the very poorest for grain, can be made the very best. When rightly improved it has a special and desirable quality which we will endeavor to explain briefly.

On lands naturally well drained by a gravel subsoil close to the surface, crops suffer greatly from the lack of soil moisture every dry season, and there is no help for them except by irrigation.

But the clay subsoil of the land described retains moisture during the driest season, and this moisture rises by capillary attraction and supplies the growing crops so that they never suffer from drouth. On this land a good system of drainage lowers the water level and provides for removing quickly the surplus water from every heavy rainfall, while the clay subsoil forms a reservoir for supplying water when needed, so that good grain crops can be grown every year, wet or dry. On this land we can have practically a combined system of drainage and irrigation, and irrigation, too, in its best possible form—that is, sub-irrigation from a natural reservoir close at hand.

The improvement of this land by drainage is as great for grass as for grain. The grass is sweeter and more nutritious, and all the tame grasses and clovers can be grown. The productive capacity of the land will be greatly increased. Grain growing need not supersede the stock-raising industry but can simply be added to it. So that, after all, this land with its great natural drawbacks is found to possess some superior advantages, and the way to secure them is to go about improving it in the right way.

It is a subject of common observation and remark how our apple orchards have been failing in late years. One principal cause assigned is the severe summer drouths to which our climate seems so much more subject now than in former years. Undoubtedly, these drouths do injure the trees and cause the fruit to ripen and fall untimely. When the country was new, fruit trees thrived best and orchards were planted on the higher and drier land. But where the country has been cleared of its forests and drained, these hillside orchards are noticeably failing, both from lack of soil moisture and exposure to sweeping winds. Such locations are decidedly not the best for orchards now. On the other hand, fruit trees will not thrive in a heavy, wet, undrained soil, but thorough drainage will render such soils loose and friable and fit them for growing trees. And it seems to us that the lands referred to above will, when deeply and thoroughly tile drained, prove admirably adapted to orchards under our present climatic conditions. At any rate, the young orchards there now look very thrifty and promising. These orchards were planted because the owners were anxious to have some fruit, and were willing to take their chances in what was considered very unfavorable soil, but it may turn out that, unknowingly, they had chosen the best locations possible.

Our annual premium list accompanies this issue of FARM AND FIRESIDE. We wish to call the special attention of our readers to it. Great care has been taken in the selection of the articles it contains. The list has been carefully revised, all articles which have proved acceptable to our patrons have been retained and many new ones of unusual merit have been added. It is decidedly the best collection we have ever offered. With a little light labor in securing new subscribers to FARM AND FIRESIDE, you can obtain any articles in the list which you desire.

Another object of this premium list is to give our subscribers the opportunity of buying cheaply many useful articles. Our large cash purchases enable us to get better terms from the manufacturers than ordinary dealers, and we wish our subscribers to share in this advantage. The articles are worth the price asked for them, and the prices in many cases are less than they can be obtained for elsewhere.

The buyer often finds that his purchase does not "come up to the brag." His new machine does not work quite as well as he was led to believe it would, or the cow he buys seems unable to make as much butter for him as she did for her former owner. Many fail to realize their expectations, but few take it as good-naturedly as Gen. Alger, who says: "My experience has been that my horses have been faster in the stable than on the road. I purchased one that was reported by the man who sold him to me to be so fast that unless I kept my coat buttoned up he would undress me in a minute. He never went very fast after I had paid for him. One difficulty with my horses has always been that the watch is too fast for them."

FARM AND FIRESIDE.

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Our Farm.

AGRICULTURAL CHEMISTRY

From the Standpoint of the Practical Farmer.

BY JOSEPH (TUSCO GREINER).

No. 18.

WOOD ASHES AND THEIR VALUE.—"I have
an opportunity to buy unleached wood
ashes at ten cents per bushel. Will it pay
me to draw it two or three miles, for use as
a fertilizer?" That is a sample of many
letters received annually by editors and
publishers of agricultural journals. It
shows that the great value of wood ashes
as a fertilizer is not yet generally recog-
nized. Indeed, they are one of the best
and most concentrated of all manures
available on the average farm.

Like farm-yard manure, poultry drop-
pings, or other manurial substances, dif-
ferent samples of wood ashes vary very
greatly in the percentage of their manur-
ial constituents, and consequently in their
value. A fair average sample of home-
made ashes, made from hickory, beech,
maple and hard oak, etc., contains about
seven per cent of potash and two per cent
of phosphoric acid, and at current retail
prices of plant foods, is worth as follows:

7 pounds of potash @ 6 cents..... 42 cents.
2 pounds of phosphoric acid @ 8 cents 16 cents.

Total, per 100 pounds..... 58 cents.

Or \$11.60 per ton. Potash (which element
represents the chief value of ashes) exists
here in a readily soluble form, and thus is
immediately available for plant food.
This accounts for the prompt and often
astonishing effect that applications of
wood ashes usually have upon plant
growth, and justifies us in placing the
value of this fertilizer much above the
result of mere multiplication and addition
on the basis of the analysis. The farmer
can better afford to pay \$15 per ton for
wood ashes answering the above analysis
than the usual rates for almost any com-
mercial fertilizer.

The variation in quality, of course,
must be taken into account. The value
of home-made, hard-wood ashes, pre-
served in best condition, is often much
above \$15, and if corn cobs are largely
used for kindling, or summer fuel, the
ashes may reach \$25 per ton in value. On
the other hand, by far the greater part of
purchasable wood ashes are worth less.
If made from soft wood, and subjected to
more or less exposure, especially leaching,
etc., the value of a ton may not be \$10.
Leached ashes, for instance, have rarely
much more than 1½ per cent of phos-

phoric acid and 1 per cent of potash, and
are worth per 100 pounds:

1½ pounds phosphoric acid @ 8 cents 12 cents.
1 pound potash @ 6 cents..... 6 cents.

Total..... 18 cents.

Or \$3.60 per ton, \$5 being about the limit
that the farmer could afford to pay for the
article per ton, and this only if near by.
In buying ashes, especially in coming to
a conclusion concerning the question,
"How much can I afford to pay for a cer-
tain lot?" there is considerable latitude
for the exercise of good judgment. But
no intelligent person need be deceived.
An examination of the goods will give
some idea of their quality, and particu-
larly show very plainly whether the
ashes are leached or not, wet or dry, etc.
This, with a knowledge of the surround-
ing circumstances (generally they are
known or can be easily inquired into),
and especially of the source of the ashes,
will be all the evidence needed in the
case. But if I could buy a lot of un-
leached, hard-wood ashes, of average
quality, at ten cents per bushel, or even
at fifteen cents, I would not hesitate to
buy all I could draw, even if I had to go
four or five miles after them.

Canada ashes are largely advertised by
various parties. Sometimes they do not
come up to the mark. More generally
they analyze about 5½ pounds of potash,
and 2 pounds (nearly) of phosphoric acid,
hence their value may be estimated as
follows:

5½ pounds potash @ 6 cents..... 33 cents.

2 pounds phosphoric acid @ 8 cents..... 16 cents.

Total, per 100 pounds..... 49 cents.

Or \$9.80 per ton. We can afford to pay
about \$12, perhaps \$13 or \$14 per ton.
This is its value for the manure-buying
farmer. The market gardener and farm
gardener may sometimes, for special pur-
poses, go slightly even beyond the largest
figures named. Many of the farm garden
crops, especially peas, beans, turnips,
radishes, onions, etc., are greatly ben-
efited by applications of wood ashes; so,
also, are the clovers, grasses generally and
potatoes. With all these crops ashes can
generally be used freely with very satis-
factory results.

There is only one precaution which I
have to add. Wood ashes, under average
conditions, should not be mixed with
other manures, especially not with poul-
try manure and similar strong, home-
made fertilizers. The worst possible use
that could be made of wood ashes is to
scatter them under the roosts in the
poultry-house. A mixture of the two
substances can only serve to reduce the
value of both. The potash of the ashes
(then in the most available form) tears the
ammonia of the manure from its combi-
nation, changes itself to a less desirable
form, and the ammonia to the volatile
carbonate of ammonia—and away this
latter goes, lost to the owner, and working
mischief among the fowls roosting just
above where the injurious vapors are
generated. Unless you have a special
object in view, always apply the ashes to
the soil, unmixed.

COAL ASHES.—The ashes of both soft
and hard coal contain little more than
traces of potash and phosphoric acid, and
as plant food are probably worth consid-
erably less than 50 cents per ton. For
stiff clay soils, however, they usually
have a desirable loosening effect, and as a
top dressing and mulch, especially in
fruit gardens, etc., they are very benefi-
cial. Still, I think the best use that can
be made of them is to sift and put them
under the hen-roosts as absorbents, or
use them in a similar way in stables or
privies. Sifted coal ashes absorb liquids,
fix volatile ammonia, and prevent offen-
sive odors.

COTTON-SEED HULL ASHES.—These are
available in many sections, and not only
a most valuable and highly concentrated
fertilizer, but usually a very cheap one,
also. A fair average of a number of
analyses gives it about 25 per cent
of potash and 10 per cent of phosphoric
acid. I would make an estimate of its
value as follows:

25 pounds potash @ 6 cents..... \$1.50

10 pounds phosphoric acid @ 8 cents..... .80

Total, per 100 pounds..... \$2.30

Or \$46 per ton, and we could easily afford

to pay \$50 for it; yet, it is often to be had
for \$20 per ton, and no tiller of the soil
should neglect to make liberal use of it,
whenever it is offered at such rate, and
the manure at home is not superabun-
dant. Some samples of this contain 30 per
cent of potash and 13 or 14 percent of
phosphoric acid, being worth, perhaps,
\$60. Can be used to best advantage for
the same crops as recommended for wood
ashes. For small fruits it is also of
especial advantage.

THE PEAR IN CALIFORNIA.

The pear seems eminently suited to
California, and California to the pear. It
can be successfully grown in any part of
the state where any other fruit will grow.
It flourishes from the extreme southern
portion of the state to its northern limit,
in her lowest, richest valleys, and up the
sides of her Sierras nearly to the line of
perpetual snow. The pear tree seems to
accept the conditions of California's cli-
mate like a native tree, and accept of more
diverse soils than any of her native trees.
It may be found growing and fruiting
finely where the soil is so alkaline that
scarcely any other vegetable can exist.
Old trees may be seen growing sturdily
in open pastures, where they have been
browsed upon and tramped around by
stock for years, on high, dry ground, still
vigorous and healthy, and maturing a
large amount of fruit, though, of course,
of little value. There are yet standing in
healthy fruiting condition pear trees
planted by the Catholic missionaries, over
one hundred years ago. Those at the old
mission of San Rafael, a few miles north
of San Francisco, bear a resemblance to
great, spreading forest trees, having passed
through all the vicissitudes of cattle-yards,
street trees and open commons.

A fruit tree that will withstand the
wilds of nature, the abrasions and acci-
dents of a half-civilized life, and the
insects and diseases and other injurious
things of a crowded civilization, and live
and fruit, might be safely expected to do
wonders under careful pruning and cul-
ture. And the fact is, the pear does do
wonders here, in production and quality
of fruit, when it has care. When the old
mission orchards were broken up in 1834,
by political changes, and the splendid
fruit orchards and vineyards that the
padres had so carefully tended and were
rightly so proud of, were turned out to
commons, the pear, the olive and the
palm were the only ones of all the collec-
tion that withstood the buffets of nature.

The grape vine would have done so but
for the reason it had not the help of its
natural support—the tree—to carry it up
out of the reach of stock and fire. There-
fore, we can safely say that these four
fruits found a perfectly natural home in
California, and the state is perfectly
adapted to them.

It is thought that these old pear orchards
of the missions were seedlings, or natural
fruit. Their fruit is spoken of as being
generally poor in quality; some of it is
quite good, but not good enough to be
handed down by grafting. Some of these
old orchards, after many years of com-
plete neglect, were taken in hand by early
settlers, pruned and cultivated and grafted
with the best modern varieties, and be-
came immensely profitable, in the first era
of California fruit culture. It is probably
true that more gold coin was received
from a single crop of fruit from one of
these renovated old mission pear trees
than any other fruit tree in the world's
history. The immense profits of these
early orchards caused a wild rush into
fruit-tree planting. The fruits brought
the yellow gold without the rough, hard
work and exposure of digging for it. The
rough miner, with his pockets ballasted
with the glittering dust, willingly ex-
changed a share of it for the melting pear
or the luscious peach or cooling grape.
The orchardists' trees, in those early
days, bore truly the golden apples of
Hesperides. The avidity with which the
miners bought the fruit made it seem
impossible the market could be glutted;
so the planting went on. The wonder-
fully prolific soil and climate of the
Golden state were not duly considered.
The trees bore many times the pounds ex-
pected. They bore immense crops yearly.
In a few years there was vast overproduc-

tion. California could grow fruit enough
for a continent, with only one thinly-
settled state to buy it, and with no possi-
ble way to reach other markets. Soon
the choicest fruits the world had ever
seen were not worth even so much as
cobblestones. The stones would make
pavements and ballast for ships, but fruit
had no value. Thousands of tons rotted
in the orchards. The mission orchard
was the first era. This glut ended the
second. And the spanning of the conti-
nent with iron rails began the third, which
is now on, and which will last, with of
course its ups and downs, as long as our
mountains and rivers, for no country,
perhaps, in the world can compete with
California in the production of pears and
some other fruits. California only grows
two varieties of pears; namely, Bartlett
and pears. It is safe to say that 90 to 95
per cent of the pear trees planted during
the past ten years are Bartletts. It is con-
sidered the healthiest and most produc-
tive of trees, thrives everywhere, and the
only fruit of the pear kind that is in
demand for canning, drying and shipping
green (for they are shipped green).

Fruit is grown here for the money it
brings, not for sentiment or the comfort
of having choice pears to eat and cook for
nine months in the year. Therefore, one
will see great fruit ranches with not one
pear tree other than the Bartlett. There is
actually no sale or market of any account
for any other pears, except for a few
Winter Nellis and Buerre Easter. As cold
storage bids fair to keep Bartletts over
until they come in the next year, these
winter varieties—if there is no change in
sentiment—will be grafted over to Bart-
letts. As I said, the Bartlett flourishes
everywhere. In the rich, deep soils of the
hot, interior valleys it is marketable early
in June, and there, if properly irrigated
and cared for, it matures three crops.
First, a full crop in June, then a second
half crop and a small late crop. An or-
chard thoroughly cared for will go on in
this same line for years and years. There
are no failures; of course, there will
be great crops and smaller crops, but one
may truly say the Bartlett "gets there
every time." As yet, tens of thousands
of Bartletts are being planted every year.
Where it will end, it is hard to tell, but
with the whole world for a market for
canned and dried Bartletts it is hard to
believe overproduction possible.

The great diversity of climate in Cal-
ifornia, in the items of summer heat and
coolness, extends a fruit over a great
length of season. For instance, the same
grape may be found ripening at different
points in the state from June to Novem-
ber. And this ripening is not governed
by latitude at all, for a certain fruit may
ripen earlier at Redding, in the extreme
north, than it does 700 miles south at San
Diego. Earliness and summer heat de-
pend here on the configuration of the
country with the resulting draughts of
heated air, shelter from cold draughts, etc.

But to make the Bartlett the boss of all
fruits, besides its ripening two and three
crops, nature, "or some other man," has
given it another kink, not only strange
but valuable, which is this: In some of
the very early, small, lateral valleys, nota-
bly Vaca valley, the earliest point of fruit
ripening in the north half of the state for
all other fruits, the Bartlett starts out in
early spring bravely, grows to one half to
two thirds its natural size, stops, takes a
complete rest for two or three months,
then grows to a magnificent size and
quality and ripens up directly after the
same fruit from all other points has been
marketed, thus giving our canners three
to four months on Bartletts.

The modern California pear orchard is
very carefully pruned, trained and culti-
vated by the best cultivators. The trees
are headed low in the start, and carefully
pruned and trained into a goblet or vase-
shaped head. In large orchards the pear
and plum are given the lowest, heaviest,
richest, moistest soil, not because they
will not do well on rich, deep uplands,
but rather because the other fruits require
lighter, warmer soil.

In the great interior valleys, and in the
dry foot hills of the Sierras, and every-
where south, except in moist coast val-
leys, the pear requires irrigation—same

as all other fruits. Though very generally, except in soils of such open, loose texture as not to hold moisture, choice fruit can be grown by thorough cultivation alone.

There are dozens of pears that most of us would prefer for all purposes to the Bartlett, and if we were planting here we would plant one or two pear trees each of twenty-five to fifty varieties for our own home use, but for market it would be simple to plant any but Bartletts, and the winter varieties named. In the north coast counties neither the pear, other fruits nor crops require irrigation. Our soils are very rich, deep and retentive of moisture, with no cold in winter or extreme heat in summer, yet the time will come when the helpful hand of proper irrigation will produce wondrous results.

D. B. WIER.

CLAREMONT COLONY.

Some one reminds me of my promise, given some time ago, to tell something of my last visit at the Claremont colony, in Surry county, Virginia. I am sorry; for the promise was hastily made, and must be lived up to, however reluctantly. My first visit, in the glorious time of spring, when everything was looking fair and promising, had given me a very good impression of the comparatively new colony. A large number of nice cottages had been built; there were churches, hotels, stores, schools. Society good, and everybody seemed to be happy, with Mr. Mancha busy from morning until night, and full of energy and confidence. Fields were being cleared of stumps, and made ready for planting fruit trees and small fruits. A railroad station was established, and steamboats and sailing vessels stopped at the dock.

Mr. Mancha, the founder, undoubtedly was in earnest, and meant well. The enterprise had nothing in it of the dubious character of some of the Florida and many other southern colonizing schemes. I, myself, was very hopeful, and predicted a very bright future for the young colony. It is true, the soil is not an ideal one. It is clay loam, with very little humus in it, in most places, and works lumpy, needing considerable labor and coarse manure or clovering and fertilizer, to bring it into tilth and productiveness. The climate, however, is delightful, its only drawback being the adjoining lowlands—theague-breeding marshes of the James river and lower Virginia. Pears and some other fruits grow to perfection in the colony. It is a paradise for grapes, strawberries, peaches, and for all sorts of vegetables. Get the land in shape and you can produce almost anything, and very cheaply, too. The chief trouble is how to dispose of things after they are produced, since the shipping facilities have never been very good.

My last visit—in November, 1888—was made during a rainy spell, and I shall never forget my walk from Raymond to Claremont, eight miles, through the sticky, slippery mud and in a driving rain. No wonder I was disgusted with the colony for some time, especially since I found that no progress had been made—few houses having been built, and some of those already built being empty. The trouble, chiefly, is that the land has been sold in twenty-acre lots to outside people, who have never done anything to change the place for the better. The land is left as it is, without effort toward building up. The only class that is really needed there and could make an improvement; namely, actual tillers of the soil—to cut down the timber, to plow, sow and reap—do not seem to come, while the place offers no chances for other classes, especially none for mechanics; too many there already.

The outlook would be even less bright but for the energy of an Englishman, Mr. Atkins, who, after considerable trouble, has succeeded in getting English capitalists to start a broom-handle factory on a large scale in Raymond. Now the second-growth yellow pine, so abundant there, is being utilized—worked up into clean, bright, nice, round handles, put on board of sailing vessels at the dock at Claremont and shipped directly to England, where a remunerative price is secured. This makes some demand for labor and brings in money, so that this establishment may

prove the nucleus for a new, thriving colony, soon to eclipse the original Claremont.

Do I advise any one to buy land in Claremont? No, unless they intend to move on it and improve it, and have some capital and are not afraid of "malaria." And certainly not until after they have seen land and location. If a number of people would go together and begin to produce something, extensively enough to induce the steamboats that ply between New York and Richmond to land at the dock, and take in freight at a reasonable figure to New York, then—and not until then—there will be some hope for the ultimate success of the colony.

Col. Stone, late with Mr. Mancha, has started a similar colonizing scheme at Hammonton, New Jersey—five acres of white sand at thirty dollars an acre, in monthly installments. I do not know what success he has. Hammonton, the great poultry place and the place of great poultry editors—as our readers know—is nothing more nor less than a recently-started colony, and the poultry business and small fruit growing next, have made a pretty and quite large village of it. The new colony is situated close by, and whoever wants to raise "spring chickens" for market will find Hammonton or immediate vicinity just the place.

DOUBLE TAXATION.

I have been much interested in this discussion concerning the double tax paid on mortgaged property; and although I can see that the mortgagor pays the taxes on the mortgages indirectly, still, I agree with the Ohio subscriber, and think that the property covered by the mortgage, and not the mortgage itself, should be exempted from taxation.

There are several reasons for this. One is that it is the simplest plan. Every man should pay taxes on all the property he owns. The lender owns the money which the mortgage secures, and would or should pay the same taxes on it if he kept it in his pocket or invested it in trotting horses or anything else. The borrower hires the money—pays interest for the use of it, and of course he expects to pay more than the tax on it. He would not expect to hire a horse and buggy from the livery stable for less than the expense of keeping them; neither would he expect to pay taxes on them if he were to meet the tax collector while using them. So the money which the borrower has hired, not being his property, should be deducted from his tax list. I think your readers will agree that this is simple enough. Let every man pay taxes on his own property, no difference what use he makes of it.

As to the bulk of the mortgages being held in the city and paying a higher rate of taxes, that rule has its exceptions. In this county, for example, the mortgages are nearly all held by a few wealthy farmers, who came here early and grew up with the country. At any rate, a part of them will be held in the country, and it would be difficult for the city lender to charge higher interest than his country brother, especially in states where the rate is fixed by law, for the legal rate is the same all over the state.

Even if they were all held in the cities, they should not, in justice, be taxed as city property, for the mortgage is not property at all, but is only security for money, and the money should be taxed where it is invested. If a man owned land in one county and lived in another, he would probably keep the deed to the land with him. In which county would he pay the taxes—the one containing the land or the one containing the deed?

As for concealing the mortgage, that could be remedied by asking the mortgagor who held the mortgage and making a note of it. In this state mortgages are always recorded, and by examining the records they are easily listed. If mortgages are to be exempted from taxation because they are sometimes concealed, we should also exempt merchandise, for the merchant may sometimes conceal part of his stock. The consumer pays the taxes anyhow by paying a higher price for the goods, so we might just as well tax the consumer directly, and perhaps the merchant would sell cheaper.

In this state, and in some other states and territories, the rate of interest is not fixed by law, and I am sure if mortgages were exempted from taxation here, the taxes would go into the pocket of the money lender. There seems to be little connection between the rate of taxation and the rate of interest here. Taxes are between two and three per cent, and interest from twelve to fifteen. The money lender will charge all the interest he can get. And sometimes he can get almost as much interest on his loan as the borrower can make on the land he bought with it and all his work besides.

I am afraid a discussion of the subject of taxation will not do much good to prevent farmers from running into debt, for, as a general thing, a farmer never goes into debt unless he is forced to. The farmer has a greater dread of debt than any other business man. He is often hampered in business transactions by the want of a little ready money, which could be borrowed, but which he will not borrow, and so loses the opportunity to double it. He sells fifty cents' worth of potatoes in July and buys fifty cents' worth of sugar, getting five pounds. If he had bought the sugar in January he could have got ten pounds for the same money; but he did not have the money then, and would not borrow it. His potatoes might have got the rot so he could not sell them, and he would still have been in debt. Whereas, if he does not buy the sugar till the potatoes are sold, he can do without it if they rot.

M. B.

Burney Valley, Cal.

THE BUTTER EXTRACTOR.

Have you noticed the new invention called the "butter extractor?" I see it has been tried in New York, before some dairy experts, among whom was the editor of the *American Dairyman*, and gave entire satisfaction to those in attendance. After getting what information I can on the subject, and thinking the matter over, I am inclined to the opinion the "butter extractor" is the coming machine. It may come right along. Few inventions are perfect at once. You know the centrifugal creaming machine was at first quite crude and problematical. But I had faith in it, which has since been justified.

The butter extractor is only another step in advance in the same direction. It may be called a centrifuge with a churn in it. In the center where the cream collects, there is an "agitator;" this is the name given to it, but it performs the office of the churn. Sweet milk at 62° Fahr. is run into the machine just as it is into the centrifuge. But instead of milk and cream it comes out skimmed milk and butter, the milk at 64° and the butter at 65°, and in the granular form. An analysis showed .19 of fat left in the milk, and the butter contained only 1.86 per cent caseous matter. It therefore would not be improved by washing, unless a small addition of water is necessary to dissolve the salt. It can, therefore, be at once salted and worked into a solid mass and packed for market. But it is perfectly sweet—real sweet milk butter! This will be a serious objection, I suppose, to the lactic-acid advocates, but may in the end settle some now mooted questions. Washing the butter while granular, in sour milk, has been suggested. This would cause it to more nearly approximate oleomargarine, but would it improve the flavor or keeping quality?

As for myself, I have not yet lost faith in sweet-cream butter, notwithstanding the strenuous advocacy of sour-cream butter and the straining on the part of private dairymen to imitate the product of the creamery, even sometimes brauding their tubs "creamery." Of course, the creameries like this, as they can make nothing else but sour-cream butter, and, like the fox in the fable that lost its tail in a trap, they urge the fashion.

The butter extractor purifies the product the same as the centrifuge creamer does, by throwing the fibrine, pus, animal tissue, albumen, etc., to the periphery, while the cream is left in the center. It may be that sour milk will as readily part with its butter as sweet milk does. If so, then all can be satisfied. But the

calves and pigs, in most cases, will get only sour milk, which to them, if it could be submitted to a vote, I think, would be declared an objection, as it really is, scientifically.

In the trial at New York, twenty-one gallons of milk were run through the butter extractor in ten minutes, and the product was over seven pounds of fine butter, or about three fourths of a pound a minute. Doubtless, with practice and some improvement, a pound a minute, or sixty pounds an hour can be turned out—perhaps even more. All further handling of milk and care for cream is ended. You milk, and as soon as the milk is cooled to 62°, it goes through the extractor, and that concludes the performance.

This looks like a prophecy of a big revolution in dairying. But it must necessarily come slow, not only from the slowness of popular education up to a new thing, but because of the impossibility of supplying a sudden, universal demand. Then the price, as in the case of the centrifugal creamer, will retard and militate against its general introduction for a long time.

Perhaps, in time, the hoax of several years since may become an accomplished fact. It was said a chemist had discovered a method of making butter directly from grass! Who shall say that we may not yet learn to extract vegetable oils, flavor them, and use them as we now do butter? —T. D. Curtis, in the *Jersey Bulletin*.

BADLY-DRAINED SOIL.

Probably no better illustration can be given of the effects of water on growing plants than what we see in the case of plants growing in pots. Every pot is provided with a hole in the bottom to allow the water to drain out when the soil becomes saturated, and with the exception of water or bog plants, this drainage is a necessity. If we see a plant whose foliage turns yellow, or drops off, or which fails to grow, and whose whole appearance is unthrifty, we are almost sure to find the trouble to be at the roots, and not infrequently we find the drainage is clogged and the roots are inactive. Turning the plant out of the pot, placing some bits of broken crock at the bottom, and then some coarse material, the plant is returned to its place and filled in with fresh soil, and in a short time it starts into new growth and shows that it can grow if the conditions are suitable. Without healthy roots there can be no vigorous growth. A supply of water is necessary for the roots to take from the soil what they want, but the water must pass off and not remain stagnant, or disease and death will follow. The case is exactly the same with plants growing in the fields where there is an excess of moisture below the surface.

Pot-grown plants may still further serve to show a bad effect of a surcharge of water in the soil. All plant growers are very careful in cold weather about watering their plants at night, knowing by experience that the increased evaporation will too greatly reduce the temperature, and thus check and stunt the plants. The case is the same in effect over large areas where the water is held in the soil below the surface. The temperature is kept many degrees below what it would be if good drainage existed. Vegetation commences later in the spring, arrives at maturity later, and is coarser in texture on such soils. The market gardener, the fruit grower and the farmer cannot afford to raise crops on any but well-drained lands.—*Vick's Magazine*.

HANDLING GRAIN UNBOUND.

I have put up my oats loose for three or four years, and I find it far cheaper than to either bind by hand or by machine. The way I put mine up is to cut with a self-rake machine, follow after, gather it up and shock it. Two men can follow a machine and shock to good advantage. Set the grain up on the butt end, the same as bound grain. If a man hires his grain cut, he will pay 75 cents per acre for a binder to cut the grain, and nothing less than 30 cents per acre, and often 45, for twine, and 30 cents for shocking; in all, \$1.35. You can get your grain cut with a self-rake for 50 cents per acre, and the grain set up in shocks for 30 cents, so there is a saving of 55 cents per acre. It can be stacked and threshed just as cheaply. Loose grain shocked in this way will stand more wet weather than bound grain. Mount Ayr, Iowa. C. M. C.

Our Farm.

GARDEN GOSSIP.

BY JOSEPH.

IRRIGATING THE GARDEN.—The unusually wet spring, with plowed fields turned into mud-holes, has been followed here by an unusually dry summer. No good rain for six weeks previous to September; ground all parched up, great cracks running in every direction, and down a foot deep; foliage coated with dust, leaves wilted; late cabbage, celery, etc., at a perfect standstill; heat and dust increasing and getting more intolerable day by day. Well, do you think it possible for any one to keep up his enthusiasm for garden work in the face of these discouragements and difficulties? I confess that I feel my enthusiasm considerably weakening just now.

Good cultivation—the mulch of pulverized soil—helps vegetation somewhat to at least *live* through the terrible ordeal, but that is about all. Now, if we had a river, a pond, a reservoir above us (as some people have without ever thinking of utilizing it)—some body of water that we could tap and conduct the moisture which refuses to come from above, into the gardens and fields through a system of underground tile, laid twelve or fifteen inches deep, and closely enough together so that the whole ground would receive a thorough soaking from below!

There are opportunities for arranging a garden in this manner on a large percentage of our farms, especially where the country is rolling. Why are they not made use of? Would this not add new interest as well as increased profit to our garden work? By the light of my own somewhat limited experience in irrigation I take the following as leading principles in the arrangement:

1. Every line of tile must be laid with a slight and steady fall towards the lower end.
2. The tile is to be pretty large where the water is first admitted, and gradually reduced to small size.
3. The only outlet for the water is by leakage through the joints of tile, the extreme lower ends all being closed up.
4. The water must be admitted in full volume, flooding the tile, not in a sort of dribbling, trickling way. This is especially necessary on very porous soil.
5. If the high places are irrigated thoroughly, the low ones will pretty much take care of themselves.
6. The surface must be kept well cultivated at all times, especially so soon after irrigation.

Before arranging the tile in any system, the configuration of the land has to be consulted. For instance, if we have a piece of land as shown in Fig. 1, very

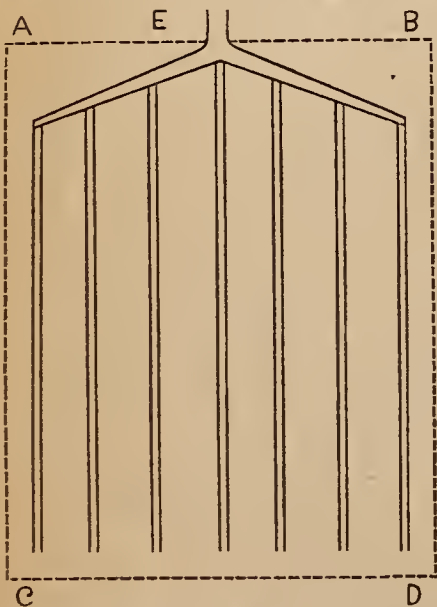


FIG. 1.—Sub-irrigation of garden sloping slightly from A B to C D, showing arrangement of tile.

slightly and evenly sloping from A B, which is the highest level, to the lowest level, C D, and a water supply can be secured at E, we might lay the tiles in a sort of fan system, with branches all running directly down towards the foot of the slope.

For a piece with considerable slope, a different course—for instance, the one shown in Fig. 2—would be better. Here again we have the highest level in the line

A B, and the lowest in the line C D. The tile is arranged in a serpentine or zigzag line, beginning with four or five-inch tile at E, and ending in two-inch tile with end closed. A study of the "lay of the land," and the exercise of a little common sense, will readily suggest the proper and simplest method of arranging the tile.

In estimating the cost of such an arrangement, you will get down to the chief expense when you figure out the amount and cost of the tile required for it. Digging the ditches is not so very expensive, as they are so shallow, and most of the work can be done by horse-power. But think what a nice thing it is to have even a small garden arranged in such way! Water whether it rains or not, and veg-

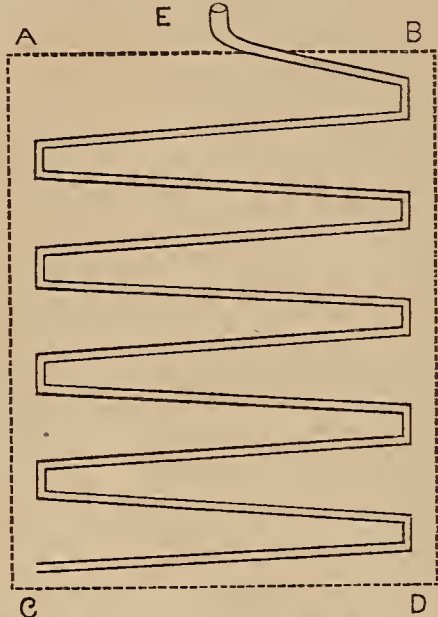


FIG. 2.—Sub-irrigation. Arrangement of tile in garden, with considerable slope from A B to C D.

etables in greatest luxuriance, even during a prolonged drouth, and when other gardens are sorry objects to look at.

I need hardly say that in some cases the sewerage from house, stables and out-buildings, properly strained or otherwise freed from solids, can often be washed into the soil by similar means, and thus made to do good service. The chief requisite for all this is a steady water supply, available at the upper part of the field to be irrigated.

SOWING SEEDS IN FALL.—If we desire to raise winter radishes, turnips, spinach, corn salad, endive and many other things, we are placed before the problem of sowing seed and making this seed germinate in July or August or September, no matter whether the soil has a particle of moisture or not. This year it has been a hard task here to make such seeds grow when planted any time in August. Deep sowing and thorough firming has not been rewarded with the usual satisfactory results. Who can tell me how to manage in order to insure the germination of such seeds without having to resort to artificial watering?

AMERICAN-GROWN CAULIFLOWER SEED.—In spite of the terrible and prolonged drouth, most of my cauliflowers have headed well. I am especially pleased with Mr. Marsch's seed, sample of which was sent us from the Pacific coast. Some of the "Early Erfurt" cauliflowers grown from this seed are beauties—indeed, veritable snow-balls, and we may well rejoice in the conviction that American-grown seed is fully the equal of the best imported. Mr. Marsch, it will be remembered, claims that he can furnish the best cauliflower seed at a mere fraction of the cost of the imported article. As we have had to pay as much for an ounce of good cauliflower seed, heretofore, as for a number of pounds of cabbage seed, it seems we have just cause for rejoicing. Perhaps Mr. Marsch will yet make it possible for the poor man to try his hand on cauliflower culture. So long as seedsmen have to charge 35 to 50 cents for a package of as many seeds, it is not likely that the majority of home gardeners will care to plant them. It seems that our seedsmen should give every possible encouragement to Mr. Marsch's enterprise.

SOAPSUDS AND TOMATO BORER.

A reader from Big Cottonwood, Utah, writes that he applied soapsuds to his tomato vines, which were troubled, apparently, in the same way as described by Mrs. A. F., in an earlier number, and it

stopped the disease or insect so that the vines recovered. He adds the caution to guard against applying too much, since it might hurt the vines.

This reminds me to speak of the great value of domestic soapsuds (washing-suds) for irrigating purposes in garden and orchard. If they were generally appreciated as they should be, we would find fewer sink holes near the kitchen door, where the suds are weekly emptied on the ground on washing days, left to putrify and to poison air and soil, creating sickness and discomfort to the inmates of the house, and we would find healthier and more luxuriant plant growth in the garden. I have often applied them hot to the body of fruit trees when nearly ruined by borers; and this treatment has given trees a new lease of life. I cannot say whether by killing the insects and their eggs or by making the trees strong enough to endure borer attacks. Applied to the roots of melon and cucumber vines, suds have usually seemed to make the plants remarkably strong and productive, and help them to resist disease and borer attacks. There can be no doubt that such applications will give good results with tomatoes, whether these are well or ailing, and I do not anticipate the least danger from even a very copious use of the suds. There are no trees or vegetables that I would not be glad to treat to liberal doses of good, strong washing-suds.

Our friend, Wm. G. Sirkles, whose report on tomato borers appeared in FARM AND FIRESIDE of September 1st, protests against being transferred to Nebraska (by some clerical mistake), and wants to have it known that he still lives in Columbia county, N. Y. People in Nebraska will feel relieved, I suppose, to learn that the tomato-stalk borer has not yet invaded their domain.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

PEACHES IN MINNESOTA.

A few days ago I visited Mr. Peter Gideon at his farm at Excelsior, Minn. Mr. Gideon, it will be remembered, originated the Wealthy apple. Among the things of interest there I noticed about a hundred very thrifty peach trees, many of which had a good crop of fruit on them and from others the crop had been harvested. I have long known it possible to grow peaches in Minnesota, but did not think that it could be made so much of a success as was here demonstrated. I expected that the trees would not look vigorous and that they would soon run out, but these trees were so thrifty and there were so many of them, that I felt that it was successfully proven that peaches could be grown in Minnesota by those who would take the pains.

When Mr. Gideon planted the trees, he left a roof-shaped pile of soil in the bottom of the holes for the trees to "straddle," so to speak. He planted a little deeper than is the ordinary custom, putting one good-sized root on each side of the pile of soil in the bottom of the holes and removing all others. These roots extending in opposite directions, but on nearly the same horizontal line, make a hinge on which the trees may easily and safely bend to the ground. In the fall of the year, when the wood is well ripened, he digs out a hole on one side of each tree, so that two trees can be bent together. The trees are then laid over and tied to the ground, having, when planted, been put about eight feet apart in the row, and had their roots so spread that when bent one tree can overlap the other. As soon as severe cold weather sets in, they are covered with corn stalks or hay. This has been found to be a much better covering than soil, for when covered with soil the bark is often injured so that it peels off in the spring. The depth to which the hole must be dug increases each year, for the bend must take place at the point where the roots are flexible. The covering must be sufficient to keep out the severest cold, and not so much that the trees and ground are prevented from being frozen. The matter of laying the trees down and covering them is not so expensive as might be thought by those not acquainted with the work.

Another device which I have seen used to enable the laying of trees on the ground is made by cutting off all the roots on one side of the tree, and by extending the others all in one direction and quite horizontally, so that when a hole is dug of sufficient size, on the side on which there are no roots, the trunk will easily lie in it, and the top can be covered. I think, however, that the method first mentioned is superior to this latter.

JUNE BERRY.

This plant is little known, and has only lately commenced to attract attention, but if it is improved by cultivation as much as other of our wild fruits have been, it will prove a very valuable acquisition. It is called, also, serviceberry and shadbush or shad-flower, and is very widely distributed over the whole country, but is especially abundant in the northern states and Canada. Its botanical name is *Amelanchier canadense*, and it is therefore very nearly related to the apple and quince, but not at all to the blueberry, which it resembles in form.

It has numerous varieties, varying from a small shrub to a small tree twenty-five feet high. The smaller varieties are most widely distributed, and are the kinds cultivated. I have eaten the fruit of this dwarf form in Massachusetts, New Hampshire, Iowa and Minnesota. Wherever it grows it is perfectly hardy. It has white, rather showy flowers early in the spring. The fruit ripens very unevenly in June or July, before the blueberry, for which it is often sold. The birds eat it greedily. Its varieties vary much in the amount of fruit produced, but not greatly in the flavor, which is mild and agreeable. A rich, loamy soil is best for its cultivation, and the plants should be set about five feet apart each way, and kept at the height of three feet.

All the Juneberries propagate easily from the seed, suckers, wood cuttings, root cuttings, layers and by grafting on the hawthorn and quince. Grafting is mostly used in propagating the ornamental kinds, for which purpose the larger varieties are most valuable. Dwarf varieties may be grafted on tall kinds, and so produce small, handsome, round-topped trees, which are very showy in the spring with their white flowers, and in the autumn with their handsomely-colored foliage.

The western form of Juneberry (*Amelanchier canadense* var. *alnifolia*) is probably the most promising variety for cultivation. A form of this, the "Success," sent out by H. E. VanDeman, from Kansas, is highly spoken of. I have fruited the Chester Centre, from Iowa, for one season, and find the fruit large and of good flavor. The *Amelanchier alpina* is also highly spoken of, but my plants, though large, have not yet fruited.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Fertilizer for Strawberry.—H. J. B., Groton, N. Y. You had better put the fertilizer on very early, if at all, this fall. I should prefer to apply it next spring before vegetation starts. Some fertilizer should be used containing a large percentage of soluble phosphoric acid and potash, and a small amount of nitrogen. This may be obtained in the mixtures of "fish and potash," offered in the market, though they are often too rich in nitrogen. Steamed bone or ground bone and potash are good. Of the fish and potash, use one half ton, or perhaps 1,200 pounds per acre. Of the ground or steamed bone, use about 600 pounds bone to 400 pounds of kail (potash salt.)

Pruning Grape Vines.—S. M., Jamestown, Ont., Canada. Grape vines may be pruned any time after the leaves fall and before the sap runs in the spring. Grape cuttings should be made late in the fall, and be wintered over, buried in dry soil outdoors, and should be planted out in the spring after the land is well settled.

Nursery Book.—A. M., Titusville, Pa. There is no one book which is a complete guide to all fruit trees of America. Probably for nursery practice "Thomas' American Fruit Culturist" will be your best book. It can be obtained through any bookseller.

Erie Blackberry.—J. R., Iowa. We do not know much about the Erie, as yet. It has been grown only one season at the Minnesota Experiment Station, and then it was covered in the winter. It is quite rapid and healthy in its growth. We should be glad to hear from our readers who have had experience with it.

Our Farm.

THE PEACH IN MARYLAND.

In a recent bulletin the agricultural department says the peach is by common consent the choicest fruit of middle latitudes; that though cultivated in enormous quantities, the facilities for drying and canning on a large scale have become so general there is a demand for the product of even the most prolific years. The bulletin gives a very complete history of the peach in Maryland, which shows that peach growing has generally been successful, and more profitable than most other of the farm industries; that skill and industry are required in peach growing, and that not every man who sets an orchard becomes a successful peach grower. There are many obstacles to be overcome, and failures are not infrequent. Nevertheless, in the peach districts, no other crop can be grown with anything like the same amount of profit. Many farmers have become rich in the business, and very often a comparatively small peach orchard has yielded a larger money return than all the rest of the farm.

Some idea of the profits of successful peach growing may be gained from the following statements, names and locations being omitted in this letter. A seventy-acre peach orchard, now nineteen years old, has borne twelve crops at a yearly average value of about \$6,000. One orchard of 2,700 trees netted its owner over \$40,000. The trees are between twenty-one and twenty-six years old, and appear healthy enough to bear peaches for another five years. During a series of years, the tenant on a farm named made enough out of his share of the peach crop to buy a valuable farm of his own. One tree mentioned bore \$20 worth of peaches, another tree, \$25 worth, and a third tree \$26.50 worth. From 400 trees (four acres) \$205 per acre was realized; \$1,200 worth of peaches was sold from 12 acres; 400 acres cleared \$38,000. Several sold from 20,000 to 60,000 baskets each at a clear profit of from \$10,000 to \$30,000. A farm sold for \$31,000, yielded the buyer the first season, peaches enough, over and above all expenses, to entirely pay for the farm. A peach grower says "so far as peach growing on a large scale is concerned, the net profits may very safely be set down at from \$100 to \$175 per acre, while in many instances they yield right through from \$175 to \$250 per acre; 100 acres in 14 years yielded \$162,000, an annual return of \$116 per acre; 325 acres in 9 years yielded \$321,000."

These remarkable statements show that peach growing outranks many farm industries that are generally considered profitable. The advance in land has been from a few dollars per acre to \$100 to \$300. In sections, when peach growing was at its height, real estate brought fabulous prices, but usually paid for itself in peaches within a few years. Sales are mentioned as high \$150, \$200 and even \$300 per acre, but in some sections in upper Maryland, owing to ravages of yellows, there has been a marked depreciation. The conclusion one draws from the report is that peach growing is now tending to the southern counties. The time is probably near at hand when Prince George's county is destined to rival the eastern shore in the growth of this delicious and profitable fruit. The Maryland Agricultural Experiment Station, located in this county, eight miles north of Washington, is now growing all varieties of peaches, to test which are best suited. There are thousands of acres of land lying idle within sight of the capital of the United States as well suited to the culture of the peach as any in the state, and whose probable possibilities of profit are as great, which can be bought at lower prices than are usually associated with good lands, which, with attention drawn to them, are likely to advance greatly. Peach trees will bear in three years from planting. G. I. J.

Washington, D. C.

\$500.00 Cash

Given Away as Prizes to those who send the largest clubs of Trial Subscribers to this paper. Read about it on page 3.

EXTRACTS FROM CORRESPONDENCE.

FROM WISCONSIN.—This is a very good country for a poor man. He can get work every day in the year at good wages, in the lumber woods, on the rivers, in the mines, railroads and on farms. Wild land is from \$1.25 per acre up to \$8. The timber is mostly hard maple, birch and basswood. Partly improved quarter sections can be bought for from \$500 to \$1,200. G. H. N.
Armstrong Creek, Wis.

FROM KANSAS.—Lincoln is one of the best wheat counties in the state. Wheat, rye and oats grew in abundance this year, and corn promises a good yield. We raise a fair amount of fruit, such as cherries, peaches, grapes and some apples, though they do not do as well here as peaches or cherries. We can also raise fine currants. Cattle thrive well here. There are very few sheep raised here, though they would certainly do well, as grass grows in abundance. A healthier place could not be wished for. C. F. A.
Orwirth, Kan.

FROM KANSAS.—Kansas is booming, this season. Crops are good throughout the state, with probably the exception of four or five of the most western counties. Cloud county is considered to be one of the best. It is a gently rolling country, all prairie, with a small quantity of timber along the streams. Native coal is found in considerable quantities. The county is traversed by the Republican river and many creeks. It has six railroads, which give ample transportation facilities. Land sells at \$10 to \$50 per acre. There has been plenty of rain this season and corn will make a big crop. Oats thresh about 35 to 60 bushels per acre. This makes the farmer feel pretty good. For the past two or three years there have been very poor crops on account of dry weather. The soil is very fertile, and the country is beautiful. S. B. L.
Clyde, Kan.

FROM ARKANSAS.—Benton county is noted for its fine fruits and pure springs of sparkling water. Several of the springs are medicinal. It is a good place for a poor man; there are many men with families making a good living on from five to ten acres of land in the fruit business. The small-fruit business is very profitable. The western part of the county is fine farming land, while the eastern part is very broken, but good for stock raising. Stock needs but little care in the winter. Land here is very reasonable. This county has never failed raising enough to do them. I am a Union soldier. I can express my opinion on politics here as freely as any place in the United States. This county is filling up with northern people very fast. The people here are all glad to see them come. A more sociable people than those here cannot be found. E. F.
Lowell, Ark.

FROM SOUTH DAKOTA.—Our prairie land is the most favorable for farming. There is but little waste land; the hills mostly slope just enough to drain the land, which is of a black loam, with yellow clay subsoil. The ravines and sloughs between the hills furnish grass even in the driest times, which is of the greatest importance for cattle raising, as the prairie regions seem to be more or less subject to occasional drouths. The mellow soil is the most tenacious in retaining moisture underground. We raise No. 1, hard wheat, oats, flax, barley, rye, corn, potatoes and beans. Only orchard trees are not at home here. The prairie soil is hard to break; it is interwoven with the root of a plant we call shoestring, but the new ground is the very best for wheat. The country is pretty well settled. Prairie land may be bought at from \$7 to \$10 per acre; improved, 160-acre farms at \$13 to \$20 per acre. Lenox, S. Dak. D. B. P.

FROM VIRGINIA.—Goochland county is on the James river. We are about twenty-five miles from Richmond, with direct roads and good markets. Cereals of all kinds grow here; also, fruits and grasses that will grow anywhere. There is an abundance of pure, cold, spring water, and pure, health-giving odors of the pine forests, which prove of great benefit to those troubled with throat or lung trouble or catarrh. Winter dairying pays well here, as the mercury seldom goes down to zero, and cattle can graze nearly all winter, while butter brings from 25 to 40 cents per pound; calves, from three to five weeks old, bring from \$3 to \$10. Sheep pay well, as it costs nothing to feed them, and early lambs bring a big price. Poultry, also, pays well, as hens with a little care lay all winter, with eggs at 25 to 35 cents per dozen. Broilers in February and March bring from 25 to 50 cents. We have no blizzards or cyclones, and those in search of a healthful climate need look no farther. We have splendid water-power waiting for northern energy to harness it. Land is from \$3 to \$20 per acre, according to state of cultivation. Labor is cheap, timber is plenty and all that is needed is plenty of northern settlers. Come to Virginia, beware of land agents, look for yourselves, settle in this splendid climate and be happy. A. J. H.
Oilville, Va.

FROM ALABAMA.—Pickens county is one of the extreme western counties of Alabama. Carrollton, our county-seat, is about thirty-five miles from Tuscaloosa, Ala., and about the same distance from Columbus, Miss. Land ranges from \$1 to \$25 per acre, owing to locality and improvement. Any one can have his choice of hilly, ridge, or level prairie land. We can satisfy the most exacting. One can get good land improved, right here in my neighborhood, for three dollars per acre. Land in the woods that lies well for two dollars per acre. We have plenty of timber here of every description. Our lands are being bought up by northern capitalists on account of its being so very cheap. Here is the place for the man of means to come. Labor is cheap, from \$8 to \$10 per month. I am sorry to say that one could loan almost any amount of money here at ten per cent. Here in Pickens is a good opening for machinery, as we have none of importance in the county. Our only drawback is a lack of railroads. We haven't one foot of railroad in the county. We have a recent survey that promises a road soon. Then our lands will increase in value and our county will, I am sure, be the garden spot of Alabama. I forgot to say that freestone water bubbles up in every nook, save the prairie part of our county. We have a splendid range here for cattle, hogs, etc. Our extensive forests abound with coons, fox, cats, deer, turkeys, etc., and, in fact, we have a splendid fishing and gaming country. If any one comes to live among us, he is treated with the greatest hospitality. And even if he is from the enemy's land, there is no difference. All are equal, if they are law abiding and willing to work for their daily bread. M. L. W.
Byars, Ala.

FROM MEXICO.—Our rainy season was in its full glory in August. It seems that we shall have rain in abundance to grow a fine crop. The forest and brush are covered with entwining vines, soon all to be in bloom of hundreds of colors and varieties, their fragrance filling the air. There are to be seen thousands of birds of many colors of the richest plumage, and hundreds of different kinds jumping, hopping and flying from branch to branch, each kind singing his own song, which helps to fill our souls full of love and admiration. One would think that August would be oppressive here so near the tropics, but we are quite comfortable by the cool gulf and south sea breezes, which are pretty constantly fanning us. Crops are growing fine, giving a fair promise of a good yield. Our cotton has grown so large that we have to abandon it. It is like a brush thicket. We may plant and reap every day in the year, but the most of vegetables do better planted in the cooler months. September and October is as early as we can plant onions and Irish potatoes. Both do well here; the latter does well planted in any of the cooler months up to May, and we have never eaten more delicious Irish potatoes than we raise here. Sweet potatoes grow all the year and we now have as fine tasting as we have ever eaten. Our grape crop was small this season, the vines being young, but the grapes were very fine. Strawberries do well here in the cool months. Our climate is delightful and our health excellent. We are destined to be a great agricultural and manufacturing people. Never was a colony blessed with such an opportunity to co-operate in the interest of working people. J. W. S.
Topolobampo, Mex.

FLORIDA AS IT IS.—Crops grow in this land every day in the year. Just now (September) farmers are storing away their hay, corn, first crop of millet, pumpkins, cow peas, etc. Up-land rice is about ready to gather and makes a bountiful crop of feed for man and beast, chickens, etc. Our wonderful melons are nearly at an end for this year; late peaches are coming in in plenty; Japan persimmons (see Bulletin No. 1, of the United States Pomological Department) beginning to ripen nicely; pears are at their prime; pomegranates are ripening; figs are nearly ready with their second crop; Scuppernon grapes just at their prime; guavas (main crop) ripe; pineapples, bananas, quinces, oranges, lemons, with other fruits that I cannot recall, complete the list. For winter crop, the farmer is now preparing his ground, and will soon sow cabbage, turnip, beet, lettuce, radish and other seeds. Thousands of crates of these and other kinds of vegetables are shipped from this "Central Lake" region every winter and spring. We have an immense "cold-storage" warehouse in Waldo, devoted entirely to this business. I recently gave your readers some points on Florida strawberries. I am putting out several acres myself, and want more neighbors to do the same. One of my neighbors is putting out thirty acres of strawberries, spending about \$3,000 in the operation. Let me give a few more facts about the past year's success of this industry: A gentleman living in another town writes me: "I shipped 1,024 quarts strawberries from one third of an acre, checks returned to me, \$248, and several dollars' worth used here (at home). I used \$11 worth of fertilizer." Another grower, whose success has been published in detailed figures in our Florida papers, shows net cash proceeds from one and four fifths acres (allowing for

cost of his own labor and time), \$944.34, or over \$524.62 per acre. I was told on reliable authority of a lady in the town of Storke, who made about \$900 clear profit on one acre of berries. The county of Bradford is about the center of our strawberry industry, and a careful estimate shows that about \$150,000 cash was received from the North for strawberries alone, by citizens of that county. Had it been as good a season as was last year, this amount would have been nearly doubled. Besides this, our people ship oranges, peaches, pears, grapes and other fruits and early vegetables in large quantities. Compare these facts with the discouraging reports that come from the Virginia and New Jersey fruit growers. I made a visit, recently, to those sections and heard loud complaints of poor crops and poorer prices. We now have several new railroads under construction in this section of the state, and confidently expect the Southern Passenger Association to inaugurate a series of cheap excursions from all over the North the coming winter. We must have some of the free and cheap excursions to our state, such as have served to build up the great West. Then you can all come and see for yourselves that my account is not exaggerated in the least. Maps of Florida, descriptive folders and other literature can be had free of all expense except postage. There are numerous desirable homesteads to be had in this state, and cheap lands of first-class quality abound all directions. W. W. B.
Waldo, Fla.

FROM OREGON.—A few more lines from this valley, I have no doubt, will be appreciated by the readers of the FARM AND FIRESIDE. If my experience is worth anything to any one thinking seriously of changing their locations, you have it gratuitously, the same costing me several hundred dollars. One usually pays for experience in seeking a new home, especially by travelling across the continent to get it. "All aboard for the Sound," and about twelve hundred people, representing nearly every state in the Union, took the cars. One very noticeable feature all over the Sound country was that everything the people lived on was shipped from Oregon and California, hence this fact alone induced many of us to seek the section in which these things grew. Willamette valley seemed to be the point to which the hungry immigrant's attention was fixed. We found large orchards, cultivated fields, fine barns and farm houses, and meadows and fine stock, and an abundance of everything upon which humanity subsists. And now, after looking the country all over and viewing everything from a common-sense standpoint, I, with nearly every one who visits this country here in the Willamette valley, are ready to aver that it is the garden spot of the Pacific coast. Crop failures are unknown. Abundance of everything is found here; the climate is unsurpassed, and as healthy as can be found anywhere. Lands are reasonable and money is plenty. G. W. M.
Salem, Oreg.

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Our Fireside.

MY DEARIE.

When the mornin' tips the hills
Wi' a' its gowden graundeur,
An' a' thoosand laughin' rills
Send back their borrowed splendour,
What's the fairest sicht I see
Ower a' the landscape cheery?
Ne'er a thing but Maggie's smile—
Maggie, my ain, my dearie.

When the gloamin' shows the mune,
A queen in siller reignin',
When the air is still abune,
An' ne'er a sound complainin',
What keeps my heart in a lowe,
An' leaves nae time to weary?
Sweet love—thochts o' Maggie's vow—
Maggie, my ain, my dearie.

When my cup wi' care owerfills,
An' life's hard thumps confound me,
When dark clouds and bitter win's
Blaw a' their ill around me—
What star breaks the gloom for me,
And lifts fate's curtain dreary?
Juist the blink o' Maggie's e'e—
Maggie, my ain, my dearie.

—Wm. Lyle, in the Journalist.

The Colonel's Story.

THE colonel was a regular old-time Virginia colonel, and still stuck manfully to his blue coat and brass buttons and his buff nankeen waistcoat, in which his clean, handsome, ruddy, old face never looked handsomer.

"Buff and blue is the costume for gentlemen to wear," the colonel would roar; and whatever he said, Yellow Bob echoed like a Greek chorus.

"Yes, slree; dat sutiny is so. I got a blue coat ole marse done gimme."

The colonel's clinging to old days and old ways was pathetic. Although he swore forty times a day that the war had ruined him, it had not. There was enough left for the colonel and madam and the colony of their old servants, which, as the case is frequently to this day in Virginia, had settled around them. The colonel still had Yellow Bob to swear at, and Mrs. Randolph had Patsy to carry the keys and make mango pickle and peach cordial. But the age had swept them high and dry. They talked about things chiefly that happened in the 'fifties, and when they got into the 'sixties the colonel was apt to damn the Yankees so profusely that Mrs. Randolph was fain to ask him if he remembered the trip they took to the Springs in 'forty-nine, when his pocket was picked of nine hundred and eighty dollars; at which the colonel and Yellow Bob would exchange winks. Yellow Bob knew that a race between Colonel Doswell's flea-bitten gray and Major Beverly's Sir Archy had more to do with the loss of that nine hundred and eighty dollars than Mrs. Randolph—good, simple soul—suspected. As for the colonel, the war did not make so much difference to him as he fancied. He now spent the best part of his life sitting on the broad, front porch at Drum Point, with a julep handy, and Yellow Bob within swearing distance, and for gentlemen of seventy-five, of the colonel's temperament, there is not much else to do. Horse-racing he regarded as out of the question, because he no longer had nine hundred and eighty dollars to throw away on it whenever he fancied. The colonel believed that the present age was utterly tame and devoid of incident.

"Dannne, sir, nothin' happens now; the young folks don't even run away and get married. A fellow calls another fellow a liar, and—dog my cats!—the other fellow goes and sues him in the courts. Instead of shooting him down in his tracks. Did you ever hear of Jack Thornton? Now, that man had some adventures, sir, in this very county, sir, that ought to be written in a book."

Yellow Bob here took up the conversation. "Books is fur white folks, dat's what I say. Dese hea fool Niggers gwine 'long de road ter school wid dey spellin'-books is mighty disqualifyin' ter me. Unc' Isaac Minkins he kyarn git up and preach 'bout a gret big hymn-book in he hand fur to read de Bible outen."

"Hold your tongue, you rascal!" hawled the colonel, highly pleased, nevertheless. "The infernal free school system, sir, has been the ruin of this country. As I was telling you, though, about Jack Thornton, his land joined mine, and we were at William and Mary together. Well, Jack was as handsome a fellow as ever stepped, and the only man in the county that could beat me after the hounds. He had a very pretty property, too, sir, and as likely a lot of Negroes as there was in the county, and there was eleven hundred acres in the tract at Northend. By Jove, what jolly bachelor dinners he used to give there! Eh, Bob? I got mighty near being kicked by the madam for a little turn about we had at one of those dinners. That dinner, sir, lasted three days, and I rode my horse up the front stairs into Jack's bed-room. Ah, they were days!"

"An' missis—she was Miss Sally Ambler den; she met me in de road when I wuz kyarin' ole marse home in de chaise, an' he kyaru say a

word. And I say, 'Sarvint, missis. Marse he mighty sick; I feerd he ain't gwil live twell de doctor git ter him.' And Miss Sally, she bust out cryin' an' jump off'n her horse and come ter de chaise an' look in marse's face. An' he 'gln ter holler an' say: 'I ain't sick, my dear; I'm drunk as a lord—hic. An' ef you knew how jolly I feel, you'd go an' git drnnk yerself.' Missis she turn away, an'—"

"Zounds, sir! Do you propose to tell the secrets of my life, you yellow scoundrel? But its true. I had a hard time bringing the madam around, and by the Lord, I don't believe I'd have done it at all but for Jack Thornton. He swore he had made me tight, when—ha, ha! I could drink him under the table any day in the week. The madam believed Jack, thank God, though. Well, as I was telling you, there were some monstrous exciting things in Jack's life. First, after he had settled down to live like a gentleman at Northend, old Smithers got his note for ten thousand dollars to pay some debts of honor Jack had made; and then the doggoned interest began piling up, and the black measles broke out among his Negroes, and he lost nearly half of them; and we had a drouth two years in succession, and the first thing I knew Jack was bankrupt. Old Scaife Beverly, Jack's uncle, was as rich as a Jew, and had thousands of dollars in his secretary; but the old skinflint said something or other about Jack's squandering his patrimony, and Jack swore he'd see the old rascal at Davy Jones' before he'd take a cent from him; so there he was, strapped and stranded. Well, about that time there was an election for sheriff, and Jack came to me and consulted me about his running for sheriff, and I told him he couldn't do better; and the fact was, if he didn't get hold of some ready money he'd have to sell his Negroes, and that was what he mortally hated, of course. So the next court day (the colonel pronounced it cote day) he announced himself as a candidate. I made a speech myself on the court-house green, calling upon the gentlemen of the county to support him. I was always couuted a good speaker, sir, when I was in the House of Delegates."

"An' ole missis, she was allers a mighty good han' at writin' of de speeches," chimed in Yellow Bob.

"You bandy-legged rascal," shouted the colonel, turning very red, "I've a great mind to kick you off this plantation, as I've had every day for forty odd years."

Here Bob created a diversion. "Dat sutiny was a good speech you made fur Marse Jack. Missis she was in Richmon' when dat speech was spoke. De folks dey holler an' whoop, an' Marse Jack Thornton he come up an' shook old marse's han' and says, 'Ef I'm 'lected I'll owe it to you, kunel.'"

"So he did—so he did," said the colonel, somewhat mollified. "But still 'twas very surprising to see Jack Thornton performing the sheriff's duties; and he had no deputy, either. I was mightily afraid he'd hurt his chances with Virginia Berkeley; and so it did, because Virginia turned around and married Miles Corbin about the time Jack was elected. However, I couldn't blame her very much. She was only seventeen, and Jack was too proud to go to Colouel Berkeley's house after he had lost pretty near everything; and Virginia afterward confessed to the madam that she married Miles Corbin as much to spite Jack as to please her father. Corbin was worth every cent of two hundred thousand dollars, and was a mighty prim, proper fellow; never touched a card, didn't get drunk occasionally like a good fellow. But for all his straight-laced ways he had a devil of a temper. He used to whlp his Negroes himself—just think of it, sir, with an overseer on the land—and then hand round the plate in church. Dannne, sir, if I didn't button up my breeches pocket and look him square in the eye whenever he handed his infernal plate to me; and communion Sundays, when I was up to the rail with madam, I made him stand out of my way, sir, with as little ceremony as if he'd been a yellow dog. As for Virginia Berkeley, she was a girl of tremendous spirit, and she led Miles Corbin a dance, I'm happy to say. She was pretty as a picture, too, wasn't she, Bob?"

"Pretty?" echoed Yellow Bob, "she was the prettiest 'oman ever I seed, scusin' 'twas missis when she was just married. Miss Ferginny she had black eyes dat fairly bn'n a hole in you when she look at you. She hed de leetlest foot an' han, an' when she laughed, de dimples come out all over her face."

"That's so; and her mouth—God bless me! Well, everybody knew that she and Miles Corbin wouldn't pull in harness together, and of course they quarreled like the devil. Virginia was a thoroughbred, and she held her head up high; but sometimes, the madam says, Virginia would come over here and cry as if her heart would break. And the madam soon found out that Jack Thornton was the reason of it. I don't think Virginia ever tried to get along with Corbin, although God knows no woman could have done it; but they hadn't been married a month before they had it hot and heavy."

"Ole Unc' Snake-root Jim say she throwed a kittle of bilin' water at him fust time he cuss her. Maybe dat's what dey calls hot and heavy," remarked Bob.

"Anyhow, ugly stories began to get out about the way things were going at Corbin Hall. Jack Thornton never went there, and kept out of Virginia Corbin's way as much as he could; besides, he spent all his time, nearly, riding over the country on sheriff's duty. He told madam if he hadn't been elected sheriff, and had to keep on the move, he'd have blown his brains out sitting down and doing nothing at Northend, and thinking about Virginia Corbin and her misery. Queer fellow in some ways, Jack was; seemed to like work after he got used to it."

"Anyway, it began to be talked about that Miles Corbin, the sanctimonious devil, had struck Virginia Berkeley more than once. Some people did not believe it, because when they first began to disagree, Virginia had been heard to say that if Miles ever laid his hand on her she'd kill him—and she would have done it, too; the Berkeleys are that kind, though I must say that when Virginia had her own way she was as amiable as anybody I ever saw, and if Miles Corbin had treated her right she would have made him a good wife. But she was one that couldn't stand whip and spur. It happened, though, that Jack Thornton, one night, coming home from court, found one of Corbin's servants lying at the lane gate of Corbin Hall with a broken leg. So, although he had sworn he'd never darken Miles Corbin's doors, yet he had to take the fellow up in his gig and drive up to Corbin Hall. It was about eleven o'clock at night, and the Negroes had all gone to bed, but there was a light in the house and a commotion going on. The dogs started, too, but Jack soon stopped them—I never saw a dog in my life that wouldn't fawn on Handsome Jack—when, as he told me afterward, the hall door flew open, and Virginia Corbin rushed out and almost into Jack Thornton's arms. Miles Corbin was right after her with his fist doubled up. Jack says he was so dumbfounded his head reeled, but he heard Miles order her to come back into the house. Then Virginia straightened herself up and said, 'I'll come back because I'm not afraid of you; but I want to tell you now that if ever you raise your hand against me I'll kill you as surely as I live. You've never driven me to much; I've submitted and waited and hated, but a very little more will drive me to murder.' Then, from somewhere in her dress, she pulled out a pistol."

"Do you see this? Well, I got it for just such an emergency as may happen. Jack Thornton, do you hear me?"

"At this Jack jumped at Corbin, and catching him by the collar, walloped him until Corbin yelled. But he didn't stop for that, she laid it on as long as he could stand, and then kicked Corbin all over the porch. The darkey with the broken leg began to holler, and that brought all the other Negroes trooping out, and at least forty of them saw the trouncing. And then Virginia showed them the pistol, and told them what she meant to do if he ever struck her again. Well, it was hushed up as far as possible. Virginia was the proudest woman I ever saw, and she asked Jack to keep it quiet. And so, while everybody knew that she and Miles Corbin had had a big flare-up, nobody exactly knew the circumstances. Virginia didn't even tell the madam."

"So things went on for a year or two, until one night I was waked by hearing that lazy, yellow fellow yonder tapping at my window. He had been to Corbin Hall courting a black girl over there, when Corbin died—for he died from a pistol wound."

"I hed jes done tell Ma'y Jane—nm! she were a gal—good-night," said Yellow Bob, taking up the thread of the story; "an' I was comin' through de front yard when I see de lights bu'nin' in de parlor, an' heerd Marse Miles Corbin a-yellin' at Miss Ferginny. I was skeered ter go 'way an' skeered ter stay; but pres'n'tly I hear her scream, an' I run in, an' dyar was Marse Miles layin' on de sofa wid de blood po'in' from he hade. Miss Ferginny she stan' up lookin' mighty cur'us, wid a smokin' pistol in her han'. Marse Miles he groan, but seem like Miss Ferginny didn't hear 'im. I run an' fetch him a piller, an' gin him some water, an' den I tuck out ter de quarters ter ralse de black folks an' de overseer. Dey all come runnin'. De overseer he was de po'est kin' of po' white trash. He jes come right out in cote an' tole ev'rything he see dat night; an' de black folks dey all stan' up fur Miss Ferginny, an' 'low dey didn't see nuttin' 'tall."

"That's so," said the colonel, "for Virginia Berkeley had to stand up in the prisoner's dock, and every Negro on the land swore they hadn't seen a pistol, hadn't heard a quarrel, didn't know anything about it, and that Virginia was the best mistress in the world. When I got there that night Miles Corbin was dead, the low-lived dog! Virginia met me and the madam. 'I didn't kill him,' she said, as quiet as you please, 'although I meant to do it. He struck me, and I went and got the pistol. He got it from me and went to the table to withdraw the load, when he got nervous (he always was a coward), and it went off.' Madam looked at her. 'Has he ever really beaten you?' she asked. For answer Virginia laughed a dreadful kind of a laugh, and pulling up her sleeve, showed her the marks of Corbin's fingers. 'Look here,' she said, showing her a

great bruise on the shoulder-blade. Madam just burst out crying, and put her arms around Virginia. 'Thank God,' she said, 'you didn't kill him!' You can just imagine the commotion it ralsed; but everything would have been settled at the inquest if it hadn't been for that low-lived dog, the overseer. He and Miles Corbin had been associates. A gentleman associating with his overseer! And Mrs. Corbin had ordered him out of her parlor not long before; so he owed her a grudge, and he paid it."

"Such a talk and hubbub was raised that at the next county court the grand jury returned a true bill against Virginia Berkeley Corbin for the murder of her husband. By George!" said the colonel, pausing to wipe his forehead. "As for Jack Thornton, he nearly went crazy. At first he said he'd resign the shirlevalty, or kill himself, before he'd serve the summons on her. She was stayin' here where madam had brought her the night Miles Corbin died. But the board of magistrates (we didn't have a tuppence-a-penny county court then, but gentlemen served as magistrates) sent for him, and reasoned about the trouble and expense he'd put the county to if he resigned that way without notice; and Mrs. Corbin sent him word that the greatest service he could do her was to remain in office until after the trial was over. So at last he consented, but I thought he'd die the day he served the writ on her."

The colonel paused again, confronted by the dead and gone tragedy.

"Good Gord A'mighty!" said Yellow Bob, slowly and solemnly "I 'member dat day, an' I gwil 'member it twell judgment day. 'Twas 'bout time de fish bite in June. Missis didn't 'ten ter de chickens er de cows er nuttin' den. She was all time projectin' wid Miss Ferginny. Seem like she didn't keer whe'r de tuckey algs hatch, er de cows give milk, er de 'taters come up in de garden, she was so taken up wid Miss Ferginny. When Marse Jack rid up in de yard dat day, I never see a man look like him. He was de color of a ash-cake 'fo' de ashes is washed off. Miss Ferginny she was settin' on de po'ch wid ole marse an' missis when he come up de steps. When he come to'ds her he stop an' look like he gwil drop. An' ole marse, he go up ter him an' missis, an' den Miss Ferginny she walk to'ds him an' hol' ont her han'."

Another long pause came.

"I dun know what she say, but ole marse help him fin' a paper, an' he show it ter 'em, an' dey all git in de blg kerridge an' go up ter de cote-house. An' I set on de boot wid Unc' Torm Driver, an' Patsy she rid on de place fur de trunk behin'. Missis and Miss Ferginny was inside, an' ole marse he rid horseback wid Marse Jack Thornton."

"They bailed her to appear at the next term of the circuit court," said the colonel. "It was a bailable offence in those days, and half the county was there to ask the honor of going on her bond. But she only took me and her counsel, Mr. Severn. The board of magistrates rose when she entered; and when she left the court-room and went down to get in my carriage, with me on one side of her and madam on the other, the magistrates had got out by a shorter way, and were bowing on each side of the carriage door. The presiding magistrate, in the name of the others, expressed their regrets that they were unable to go on her bail-piece; and when she drove out of the village, sitting up straight in my carriage, and looking like a queen, every man she met took off his hat to her, because, you see, Virginia Berkeley was a lady, and Miles Corbin was the damndest villain—"

Here the colonel went off into a perfect hurricane of profanity, which somehow didn't sound profane, but rather as a kind of cordial emphasis to what he said.

"She staid here until the trial came off. Of course she didn't see anybody, but the whole county called on her. Dang me, but I believe they were sorry she hadn't killed Miles Corbin after all; he deserved it, the dog! The day of the trial the madam and I took her up to the cote-house—"

"An' I rid on de boot wid Unc' Torm Driver, an' Patsy she sat on de place fur de trunk behin', an' ole marse rid on horseback with Marse Jack Thornton," echoed Bob, the parrot.

"When we got to the cote-house, you never saw such a crowd in your life. We got Virginia in the cote-room as quietly as we could, and the madam and I sat by her. And when Jack Thornton said (by Jove, I thought he'd faint before he got through), 'Virginia Corbin, what say you, guilty or not guilty?' she stood up as brave as a lion and says, just as cool as you please, holding up her little hand, 'Not guilty.' The people yelled for half an hour, and the court didn't say a word, and you may be sure the sheriff didn't."

"The overseer, Higgins, had tried to get a lawyer to help the prosecuting attorney, but he couldn't do it, and the prosecuting attorney, I tell you, had to be very careful what he said. The first witness they put on the stand was Higgins. He told a mighty straight story. He told of the quarrels between Miles Corbin and his wife, and the threats he had heard her make of killing Corbin if he continued to strike her. Then he told about my Yellow Bob waking him up in the middle of the night, and of his going up to the house and seeing

Miles lying on the sofa dying, and saying, 'My wife did this.' At this there was such a thundering row in the court-house that the court was obliged to demand order. But Mrs. Corbin remarked, out loud: 'That is true; he lied about me with his last breath.' Then the overseer identified the pistol as the one he had seen in Mrs. Corbin's hand, and saw on the drawing-room table on the night of Miles Corbin's death. And altogether it made a bad showing.

"Yellow Bob was the next witness called for the prosecution. It was rich testimony—ha ha, ha!"

Yellow Bob chuckled gleefully over the recollection. "Ev'rything dat ar persecutin' retorney ask me, I say 'Naw.' 'Did you see Mr. Miles Corbin on de sofa?' 'Naw, sah.' 'You waked Higgins up at de overseer's house about midnight?' 'Naw, sah.' 'But Mr. Higgins says you did.' 'Mr. Higgins he ain't nuttin' but po' white trash. I doan keer what he say. I doan know nuttin' 'tall 'bout Marse Miles Corbin dyin'. Maybe he had de ager, an' he nose bleed, an' he bleed hisself ter def.' 'No, he did not have any ager; he was killed with the pistol.' 'Well, den, I say, 'maybe Mr. Higgins kilt him.' De judge larf at dat. 'But,' said de persecutin' retorney, 'all the black folks seen you; they'll swear to it.' 'Well, bring 'em up heah, an' ef dey swar I dyar dat night, I ken swar jes as hard, I warn't. Dem wuffles black niggers ain't a-gwine ter discourage me. Dem Corbin niggers allers was mighty wuffles aud lyin'. Dey done took a heap o' corn outen our corn-house.' 'Come, now,' says the persecutin' retorney, 'of course you were there the night Mr. Corbin died; you gave the alarm.' 'I didn't give 'em no sech a thing; I ain't got no 'farm ter give. I wish I hedn't tole 'em nuttin' 'tall 'bout it,' I say, and den de persecutin' retorney he say, 'Now you admit you were there.' 'Naw, I ain't remit it,' I say; 'I doan know nuttin' but dat Mr. Higgins over yander is de meanest white man gwine, and Miss Ferginny, she an' missis is mighty thick; an' ef she warn't de right kind o' 'oman, my missis wouldn't hev nuttin' 'tall fur to do wid her; an' dem black uggers kin swar all dey wants dey seed me. I ain't cipherin' 'bout dem.' Den de persecutin' retorney he say, 'I can't manage the witness,' an' I jes walk right outen de box dey put me in, and when I pass Miss Ferginny, I say, 'Sarvint, mistis.'"

The old colonel had laughed heartily during the recital.

"And all the Corbin Negroes—they had about forty of them up as witnesses—gave about the same kind of testimony that my Bob did. None of them knew anything or had seen anything, or could be induced to tell anything but lies; and such lies! Every one of 'em, going out of the witness-box, would pull his wool and duck his head to Virginia; she certainly had made those black people love her, and more than one of her fights with Corbin had been about his shameful treatment of his Negroes. Severn—he's a first-class lawyer—he didn't cross-examine any of them. He said, 'May it please the court, I have but one witness, that is the prisoner herself. I desire to put her on the stand that she may tell her own story.' So he gave her his arm and led Mrs. Corbin to the witness-box, where she sat down in a chair. You could have heard a pin drop. At first she looked around her with a sort of dazed look; it was so pitiful I saw the foreman of the jury look away while he wiped the tears from his eyes. Everybody waited until she came to herself like. Then she began in a low voice to tell it all. She looked as pale as a sheet until she got to where he struck her for the first time; then the blood poured to her face.

"I don't know how I felt," said she; "I wanted to kill him, that was all. I rushed away from him, and then I turned on him. He began to back when he saw me advance. I told him then that I would get a pistol, and if he struck me again I would shoot him. He did not laugh at me then. Afterward I thought I had been to blame. I determined I would try and get along better with him. I endured that man Higgins in my house; I endured—oh, God, what did I not endure?—and it was the same. He would seize me by the throat and choke me; that was dreadful, but it wasn't a blow. At last he struck me that other time when Mr. Thornton came and beat him." At that there was going to be a devil of a row—the people hurrahing for Thornton; but Jack checked the disturbance right away. "Then," she said, after everything was quiet, "I felt that it would soon be over, one way or another—either he would kill me or I would kill him. On the night he died he said that the man Higgins should die at Corbin Hall the next day, and I should appear at the table. I replied that I would not. He lifted his hand against me, and I asked him if he remembered what Mr. Thornton had done to him for that. Then he said—but I can't repeat what he said; it was about Mr. Thornton. I went to the book-case and got out my pistol. 'You may say what you like,' I said, 'but don't touch me.' After more words he came toward me and struck me hard on my shoulder—here. A first the pain stunned me. I held the pistol in my hand. He got it from me; I could not resist with one arm. He said he would guarantee his life for that one night, and

standing by the table, started to unload it. All at once I heard it go off, and he staggered to the sofa. I don't remember anything else until Colonel Randolph came."

"When she stopped it was as still as the grave. Severn had just said something about the other side asking any questions they pleased, when the foreman of the jury talked a minute or two to the judge, and then, nodding to the jurymen, rose up and said, 'The unanimous opinion of this jury is that the prisoner is not guilty.' Such a shout! Mrs. Corbin stood up for a minute, and then, without a word, fell over in a dead faint in Jack Thornton's arms. The crowd made way for him as he carried her, as if she had been a baby, out into the court-house yard. The madam and I were there about as soon as he."

"An' me an' Patsy," added Yellow Bob.

"We put her in the carriage—"

"An' Unc' Torm Driver he lash he horses twell dey gallop ev'ry foot o' de way home."

"Hold your infernal tongue; I'm telling this story. When we got her home, of course the reaction set in. She had been as brave as a lion all the time before, but now she couldn't hold up her head. She just lay on the bed upstairs, with her great black eyes staring out of her white face, and by George, sir, I thought she was certain to kick the bucket. The only thing that roused her was when old Scaife Beverly, Jack's uncle, died without a will, and Jack got every cent the old curmudgeon left. Jack had hung around here ever since Mrs. Corbin came, but she wouldn't see him, and so months and months went on. At last, one evening when she was well enough to sit up—it was more than a year after the trial—she was sitting in the chamber there by the dining-room, looking devilish pretty in a white wrapper, when—"

"I seen Marse Jack comin', an' I run round de house an' tole him fur Gord A'mighty's sake ter run in missis' chamber, kase I was feerd Miss Ferginny Corbin had done had a fit er sumpin'. Co'se she didn't have no fit; I jes say it ter git him in dyar, an' he jump through de winder openin' on de po'ch, an' when he see her he say, kinder solemn, 'Ferginny!' I never will forgit de way he say 'Ferginny.' 'Twas jes same as if he'd tole her, 'I loves you better'n anything in de whole wide worl'. An' Miss Ferginny she fall back in her cheer, an' she begin ter cry, an' say, 'Don't, don't; I'm too wicked to live!' when Marse Jack he jes took her in he arms an' kiss her. I got so intrusted wid dem conjurements I jest stan' like I done taken root an' look in de winder, twell arf while Marse Jack seen me, an' he pick up ole marse's boot-jack layin' ou de flo' an' shy hit at me. I dodge, an' it broke missis' lookin'-glass an' her big, red berangium in de flower-pot. He gin me a dollar nixt day, an' missis she quile wid him 'bout breakin' her lookin'-glass."

"They wanted to go away from the county, but I told them they'd better stay where they were known. It could be lived down sooner here than anywhere else. Upon my soul, they were the most devoted married couple I ever saw. When the war broke out, Jack raised a company and was elected captain, and afterward colonel, and was made brigadier-general as he was carried off the field mortally wounded. The same shot killed Virginia. She never held up her head afterward. I don't think she lived six months. The madam said it was better she should die than live. They had no children. And a lot of thrifty, industrious Yankees bought Northend, and they've got a confounded steam plow that frightens all my horses, and they raise hay all over the place, and they've built an infernal ice-house on top of the ground instead of under it, and they work the whole place with twenty hands instead of sixty, as Jack Thornton did, and I want a julep—d'ye hear, you yellow rascal?" —Harper's Weekly.

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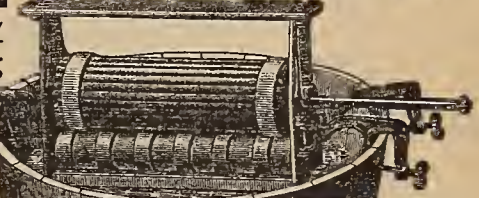
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Our Household.

GLORIFY THE ROOM.

Wide open throw the shutters, and
The curtain throw aside;
Let in the sun's bright messengers
In all their golden pride.
What matters if from costly rug
They take the rainbow bloom?
They'll shower gems on it instead,
And glorify the room.

Glad are the tidings that they bring
From wood and field and hill,
From singing bird and humming bee,
And the little, dancing rill.
Before them many shadows fly,
They banish thoughts of gloom;
Then, with a welcome, let them in
To glorify the room.

With them comes wealth—upon the weak
They many blessings shed.
Their kisses strengthen tired eyes,
And touch pale cheeks with red
No place too dear for them to seek
Its darkness to illumine;
Thank God that we can let them in
To glorify the room.

—Vick's Magazine.

HOME TOPICS.

PARSLEY.—If you have a bed of parsley in the garden, take up a few roots, put them in a box and keep it in the kitchen window all winter. It will grow nicely, and be very convenient for flavoring soups and gravies, garnishing cold meats, etc. A garnish of this kind adds much to the appearance of a plate of cold meat, and it is very little trouble to have it the year around.

KITCHENS.—Some women like a large kitchen, but I do not. Besides being more trouble to keep a large kitchen clean, one is apt to have things spread around in it, and waste time and steps going from one thing to another. In building a house, too much attention is paid to the parlor and front part of the house, and too little to the kitchen. As I think over the kitchens I have known, I can remember very few that were built with any design of saving the steps and strength of the women who must work in them. It is not uncommon to see the sink in one end, the china closet in the other, and the stove in the middle, while the cellar door is perhaps reached by going through the dining-room; the pump in the yard, twenty feet away from the door, and the wood-shed, if there happens to be one, as far away in another direction. The store-room, where flour, meal, etc., are kept, is as likely to be upstairs as anywhere. A little planning on the part of the builder would save many a tired woman.

That there are some kitchens which are models of convenience proves that more might be so. Arrange so that it shall be but a few steps from the stove to the pantry, to the work-table, to the sink with a pump in it, or to the store-room, if the pantry does not do duty for both. Have a dumb waiter in the pantry to lower and raise things to and from the cellar; and a few feet of hose which can be attached to the pump for filling the tank on the stove.

Some say they like a large kitchen, so that it will not be crowded when the tubs

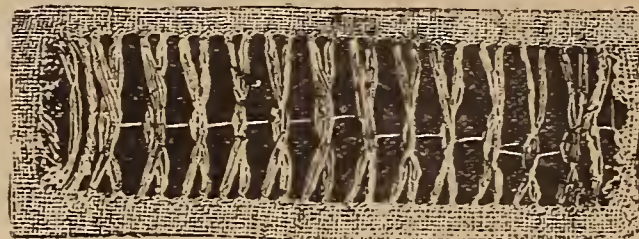
heavy tubs, wash-day would be robbed of its terrors.

ATTICS.—Another thing I would urge upon house builders, and that is an attic. The added expense would not be much, and the upper story of the house would be very much more comfortable in summer. An attic is such a convenient place for storing many things, an admirable place for drying clothes in winter storms, and a perfect delight to the children in bad weather when they cannot play outdoors. In fact, a child who has grown up without an attic to play in has missed a great deal of pleasure.

CIDER.—There is very little doubt that cider making and drinking is retarding the temperance work. Besides the danger of making drunkards with cider, many are kept out of active temperance work because they wish to drink it, or by the money there is in the sale of it. Farmers say "I can't allow all the cider apples in my orchard to waste, neither can I do without the income I receive from cider." That is very much the same plea the saloon keeper and the brewer makes. They have money invested in the business, and it brings them money.

It is a noticeable fact that among the best farmers, and in a rich farming country, very little cider is made. The orchards are so well taken care of that the supply of cider apples is very small. No one thinks of taking a load of large, fine fruit to a cider-mill. Better care of the orchards would do away with the seeming necessity for making cider.

I have in mind now a case where a man came into possession of a farm on which was a fine orchard. He was one of these

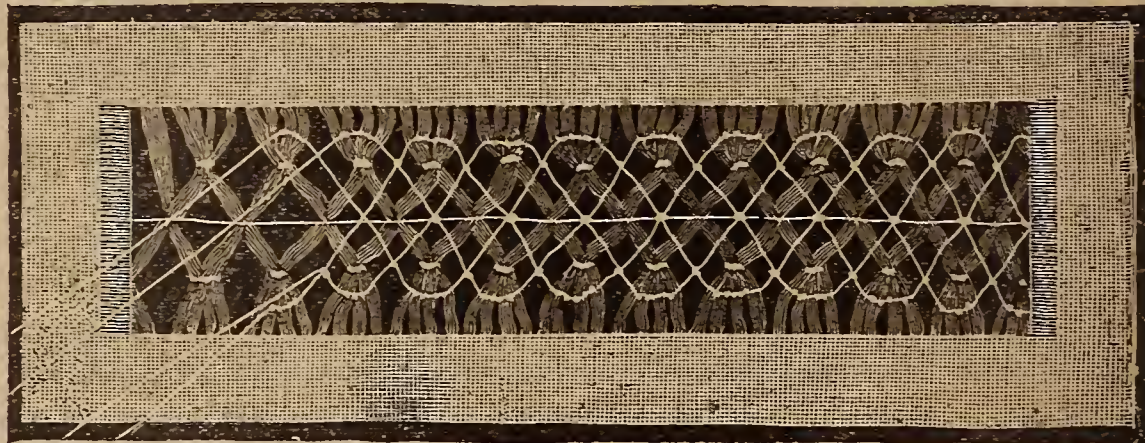


SINGLE FAGOT.

easy-going, slipshod farmers, and the place soon began to show lack of care. From bearing bushels of the finest fruit the orchard degenerated until much of the fruit was unsalable. Then he bought a small cider-mill, and every year more and more apples were made into cider. But not all of it was sold. The quantity consumed at home gradually increased until twelve or fourteen barrels would hardly supply the family. From being a strictly temperance neighborhood, it became a neighborhood of cider drinkers, and, in many cases, of drunkards. Two sons and a son-in-law of the family are bloated examples of the effect of cider drinking, and

chemist of Massachusetts, says, "The juice of perfectly sound apples begins to ferment within twenty-four hours after it is expressed, and the juice of apples that are more or less decayed, as cider apples usually are, has begun to ferment before it runs from the press." Chemists have also shown that fermented cider contains a greater per cent of alcohol than either wine or beer.

If cider is made for vinegar, let it be kept for that purpose alone, and never, from the moment it comes from the press, be on tap as a beverage. Of course, every one who drinks cider is not certain to become a drunkard, but as long as we



No. 1.—FANCY BORDER.

know that some have fallen in this way, it is not safe to run the risk. We cannot afford to place the temptation in the way of our boys.

MAIDA McL.

PRESERVES AND PICKLES.

BY CHRISTIE IRVING.

I have made a collection for the young housekeepers and girls, this time, which, I think, will fill your cupboards with toothsome sweets for all winter, being seasonable things and a good variety of them.

In attempting them, I would only put up small quantities of each. When they are gone, it will make them better another year, to have wished you had had more of them. I think we make a mistake in having too much summer fruit put up, as it palls upon the taste and one tires of it. Try a little of all of these, not more than you can easily do with your daily work. Winter brings its own fruits, and they are very nice to alternate with.

CITRON AND QUINCE PRESERVES.—Pare and cut the citron in inch pieces; boil hard in middling strong alum-water thirty minutes; drain, and boil in fresh water till the color is changed and they are tender; wash carefully the quinces; pare, quarter, core and halve the quarters; boil the cores and parings in water to cover them, one and one half hours; remove them and add the prepared quince to the liquid; boil, and when they begin to be tender add the citron and three fourths of a pound of white sugar to every pound of the fruits.

PLUM AND APPLE JAM.

After canning plums, there is often some left, not enough to fill a can; a very nice jam can be made of this by putting it through a sieve, and adding the same quantity of good apples, cooked. Sweeten to taste and put in a very little cinnamon and cloves. Cook an hour, then tie up in jars when cold.

WATERMELON PRESERVES.

Select one with a thick rind; cut in any shape desired; lay it in strong salt water for two or three days; then soak them in clear water for twenty-four hours, changing the water frequently; then put them in alum water

for an hour to harden them; to every pound of fruit use a pound of sugar; make a sirup of the sugar and a few small pieces of white ginger-root and one lemon, sliced; take out the lemon and root, after the sirup has been boiled, and add the watermelon; let it boil until transparent;

carefully lift it and put it in the jars, pouring the sirup over it.

TOMATO PRESERVE.—Scald and peel carefully, small, pear-shaped tomatoes, not too ripe; prick with a needle to prevent bursting, and put their weight in sugar over them; let them lie over night, then pour off all the juice into a preserving-kettle, and boil until it is a thick sirup, clarifying it with the white of an egg; add the tomatoes and boil until they look transparent. A piece or two of ginger-root, or one lemon to a pound of fruit, sliced thin and cooked with the fruit, will improve it.

SPICED GRAPE JELLY.—Take grapes

half ripe, crush all the juice out well, and strain. Take equal quantities of juice and sugar; to each quart add one half teaspoonful of cloves and one tablespoonful of cinnamon. Cook hard twenty minutes, then remove from the stove and pour into glasses.

RHUBARB AND APPLE JELLY.—Cut up your rhubarb and wash it; put on the fire without any water at all. Take good, sour apples, and pare and quarter, and cook in a very little water. Strain the juice from both, and put them on the stove to cook for fifteen minutes. Then add the heated sugar, three fourths as much sugar as juice. Boil hard for twenty minutes; turn into glasses and set in the sun, if possible, for half a day. Seal the next day.

SPICED VINEGAR FOR PICKLES.

1 gallon of vinegar,
1 pound of sugar,
2 tablespoonfuls of allspice,
2 tablespoonfuls of mustard seed,
2 tablespoonfuls of celery seed,
2 tablespoonfuls of salt,
1 tablespoonful of turmeric powder,
1 tablespoonful of black pepper,
1 tablespoonful of mace,
2 nutmegs, grated,
3 onions,
1 handful of grated horseradish.

PICALLILY.

2 dozen large cucumbers, chopped,
2 quarts small onions, whole,
1 peck green tomatoes, chopped,
1 dozen green peppers, chopped,
1 head cabbage, chopped.

Sprinkle one pint of salt over this, and let it stand over night, then squeeze out very dry. Put in a kettle

1 gallon of vinegar,
1 pint of brown sugar,
¼ pound box of Coleman's mustard,
½ ounce of turmeric powder,
½ ounce of cinnamon,
1 tablespoonful each of allspice, mace, celery seed, and a little horseradish.

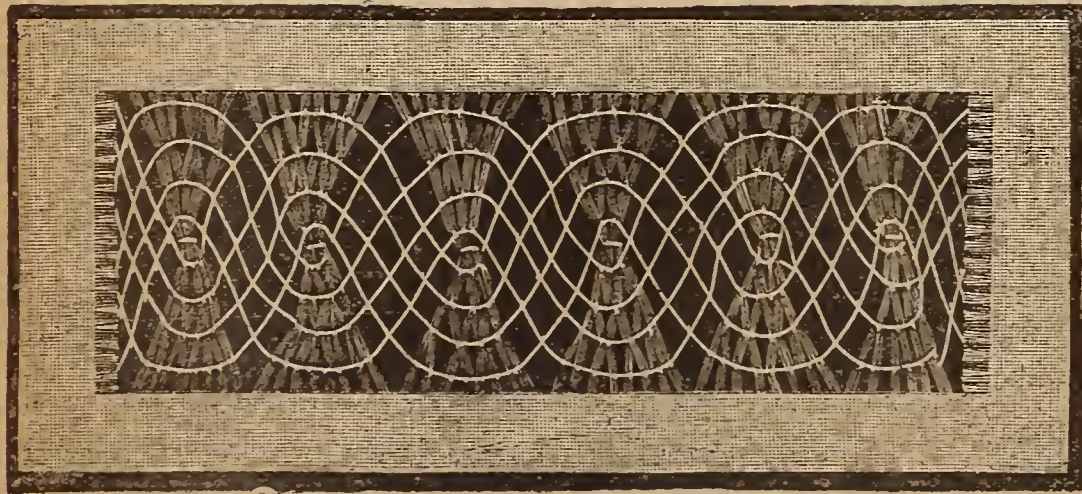
Cook the mess slowly two hours, then add two hundred small pickles, just as it is to come off the stove. Add the mustard last, as this thickens it and it is apt to burn.

BOTTLED PICKLES.—Pour boiling water over them and let stand four hours; to every gallon of vinegar take

1 teacupful of sugar,
1 teacupful of salt,
1 teaspoonful of pulverized alum,
1 ounce of cinnamon bark,
¼ ounce of whole cloves.

Boil, spice and vinegar, and pour over the pickles; seal while hot.

WEAK LUNGS OR THROATS are severely tried by our rough, wintry weather, and call for prompt treatment whenever attacked. Dr. Jayne's Expectorant is an old, well-tried medicine for all Bronchial or Pulmonary Affections and is sure to cure your Cold and hoarse



No. 2.—FANCY BORDER.

are in on wash-day; but it is better to divide the space and have a wash-room with stationary tubs adjoining the kitchen. The expense would be a little more, of course, but the convenience and comfort would be in proportion. With no carrying of water, and lifting and emptying of

the whole moral tone of the neighborhood is lowered.

Perhaps perfectly sweet cider is not injurious, but it is only for a very short time that it remains perfectly sweet, and all soon learn to like it better when it has acquired a "tang." Dr. Hays, a noted

DRAWN WORK.

Punto-tirato, or drawn work, as it is generally called, has of late so rapidly increased in popularity, that I feel compelled to acknowledge its importance by giving it to the readers of this paper. The fascinating character of the work, with its many pretty effects, has increased the demand for new patterns. I shall use, by permission, some very elegant designs in this article.

This work dates very far back. It is among the earliest attempts at ornamental work known. Some beautiful and very old specimens have been shown in both English and foreign museums. Irish linen, Finlayson-Bonsfield's finest linen thread, a sharp pair of scissors and a needle with a good eye will be needed for the work. It is always well in fancy work to get a knowledge of detail before beginning elaborate patterns; if this is not observed, the work is sure to be unsatisfactory.

In selecting a pattern for drawn work, it is always best to consider both the object which your work is to adorn, and the quality of linen which is to be used. Some patterns are equally pretty worked on either fine, medium or coarse linens, while others are suitable for only one quality.



DETAIL OF HEMSTITCH.

The first and simplest stitch to be learned is hemstitch, the foundation of nearly all drawn-work patterns. Next comes fagoting, simple and easily learned, and a most lovely finish in nearly all borders. In single rows, or in double or triple rows, the lace-like effect will be found charming, and equally suited either to fine or coarse linen.

For very fine linen use as fine a needle as possible—a No. 12 works best on linen, cambric or lawn, and with it use thread from 120 to 200. Always, however, have the thread coarse enough so that it will not fray or break too often in drawing up the bunches of threads. Never draw the thread too tight, as all work of this character needs pressing under a damp cloth, when completed, and some allowance must be made for shrinkage.

When it is necessary to cut the linen at the beginning, ending or corner of the

then remove the remainder and hem the second side.

Tie first in the center four strands together, all the way across; then on the wrong side tie two strands to the edge, then four together all the way across so as to separate the original four. Go over once more, so as to make the little squares, then work on right side.

Tie eight strands together on the wrong side, running the thread up to the edge of the linen, and coming back again to the next, so the tying thread will not be seen.

Do the drawn work first on the wrong side then on the right, working diagonally across.

EVA M. NILES.

[To be continued.]

GOOD COOKING FOR THE FARMER'S HOUSEHOLD.

FALL VEGETABLES.

The country housekeeper is so largely dependent on vegetables in feeding her family, that it is very necessary that she should know how to serve them daintily and with variety. After the early vegetables have gone, many later ones come on, and a great many very delightful dishes can be prepared from them which will tempt the appetite of the family.

DICED TURNIPS.—Pare, slice, cut in dice an inch square, boil until done in as little water as possible; to one quart of turnips add one teaspoonful of sugar, with a pinch of salt. When boiled as dry as possible, add half a teacup of cream and a beaten egg. Serve hot.

BROWNED TURNIPS.—Pare the turnips, cut in long slices and boil thirty minutes. Drain. Put two tablespoonfuls of butter in a frying-pan; when hot, add the turnips with a tablespoonful of sugar; stir and turn carefully until the slices are nicely browned; dust with salt and pepper and serve. Browned turnips are served with roast ducks.

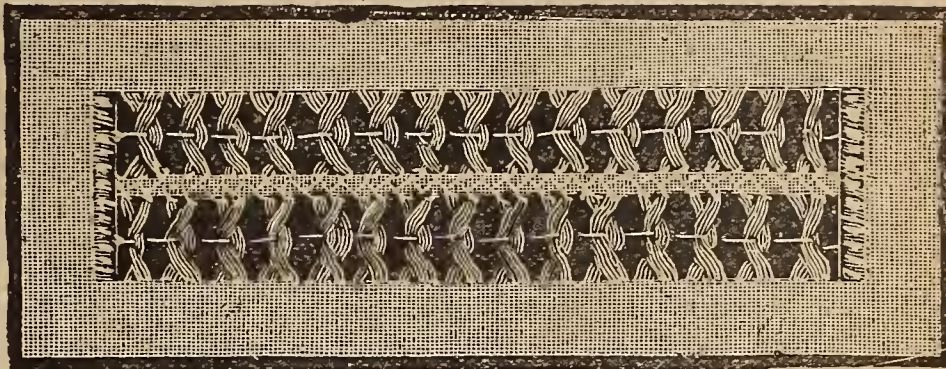
FALL SQUASH.—Cut up, take out the inside, pare the pieces and stew in as little water as will cover them. Cook until tender, mash, and let stand on the fire, stirring to dry out the water; season with butter, cream, salt and pepper.

BAKED SQUASH.—Cut up in small pieces and cook tender, mash dry; to a pint of squash add two beaten eggs, half a cup of milk, a tablespoonful of sugar and a little salt and pepper; put in a baking-dish and bake brown.

BAKED PUMPKIN.—Cut the pumpkin in halves, then in quarters, take out the seed. Place the pieces in a baking-pan with the rind down and bake until tender.

cabbage fine, put it in a stew-pan with boiling water to cover; while cooking, prepare a dressing of half a cup of vinegar, four tablespoonfuls of sugar, a little salt and pepper, half a teaspoonful of mustard and two teaspoonfuls of salad oil; let boil, add a teacup of cream and one egg; stir, pour in with the cabbage. Mix well and serve hot.

STUFFED CABBAGE.—Select a nice, firm head of cabbage. Pour boiling water over it, and let stand fifteen minutes, drain and dry. Make stuffing of two heaping tablespoonfuls of rice mixed with half a pound fresh pork sausage, a tablespoonful of finely-minced onion and a tablespoonful of minced parsley. Mix all together



DOUBLE FAGOT.

well, open the cabbage to the center, put in a little of the mixture, fold over two or three leaves, lay on more, and fold over until each layer is stuffed. Press all together, tie up in a thin cloth, put into a kettle of boiling water, add salt and boil two hours. When done, carefully remove the cloth, put the cabbage in a deep dish and pour cream sauce over it.

BAKED MUSHROOMS.—Choose large mushrooms. Peel, cut off the stalks close to the top, place them upside down in a shallow dish. Sprinkle with salt and pepper, and lay a little piece of butter on each. Bake in a quick oven for fifteen minutes, baste with a little melted butter. Serve hot on the dish in which they were baked.

MUSHROOM PATES.—Cut one quart of mushrooms, with one teaspoonful of salt, the juice of one lemon, a little pepper and mace. Have boiled six sweetbreads and cut in small pieces, dredge with cracker dust and put in with the mushrooms, add a tablespoonful of currant jelly with a tablespoonful of chopped parsley; let boil five minutes. Have baked in very small patty-pans nice puff paste, in which drop a spoonful of the mixture. Serve hot.

STUFFED MUSHROOMS.—Chop up the stalks of the mushrooms with one fourth their quantity of parsley and white onions, squeeze dry in a cloth, put a tablespoonful each of butter and brown gravy in a small sauce-pan, let heat and put the stalks in. Have ready large mushrooms, fill with the mixture, lay on a buttered dish and sprinkle with sifted bread crumbs; bake ten minutes in a hot oven, and serve.

FRICASEE OF MUSHROOMS.—Peel the mushrooms, put first in boiling water, then in cold, take out, wipe dry. Put a tablespoonful of butter into a sauce-pan and lay in the mushrooms. Set over the fire and stir, add flour enough to thicken, with a little pepper, salt, thyme and mace. Pour in soup stock enough to thin and let simmer half an hour. Take out the mushrooms, strain the gravy, beat the yolks of three eggs and stir them with the juice of a lemon into the liquor. Have prepared small slices of fried bread, lay the mushrooms on them and pour the sauce over.

SCALLOPED MUSHROOMS.—Cover the bottom of a buttered dish with a layer of dried bread crumbs, sprinkle over with pepper and salt, and lay bits of butter over. Put layers of mushrooms alternately with the bread until the dish is full. Cover the top with butter, moisten with cream and bake.

ELIZA R. PARKER.

NOVELTIES FOR CHURCH FAIRS.

Through some letters from friends, I heard of the following two new ideas for church fairs, which I thought some of the readers of FARM AND FIRESIDE would like to hear about.

The first was called the "Feast of Days." There were booths for every day of the week. In the first were three or four girls with washtubs, stove, boiler, and all the necessary appliances in miniature—washing. The tubs could be of the size many use for washing silver, small boards and a tiny oil-stove.

In this booth they have for sale, soap,

starch, bluing, pearline and all the helps, clothes-pins, line and all, which could be the donation of people dealing in those things. The motto over this booth is, "The Chinese must go!"

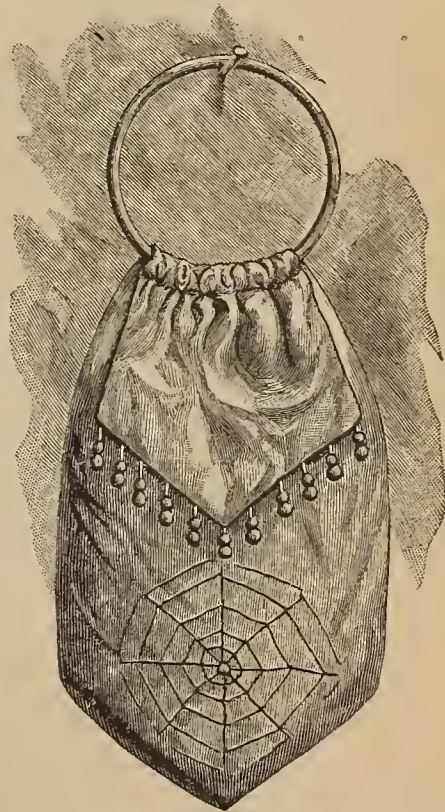
TUESDAY.—The second booth, the girls are all neatly arrayed in plain dresses, white aprons, immaculate collars and cuffs and white caps, ironing. Their motto is, "We smooth all wrinkles save those of time." Here they have irons, holders, iron stands and beads for sale.

WEDNESDAY.—Is mending day, and the girls are all busy. Their motto, "A stitch in time saves nine." Here are all kinds of darning materials for sale, cotton, needles and quaint little affairs for glove darning. These are bunches of No. 80, colored thread, braided through a ring. In the ring a large bow of ribbon is tied, and in the end of the ribbon are stuck a number

of short, fine needles. These are new and very useful.

THURSDAY.—This day should occupy one of the church parlors, and after making it as homelike as possible should be presided over by the married ladies, as it is reception day. In this booth every visitor is furnished with a tiny cup of tea and a wafer, for which *no charge is made*, the astonishing part of the evening's entertainment, as one cannot conceive of getting anything at a church fair without paying for it. Motto, "Welcome the coming, speed the parting guest."

FRIDAY.—As this is sweeping day, this booth contains everything in this line, brooms, dust-pans, dusters (both feather and made of cheese-cloth), bags to keep them in, made like the following cut:



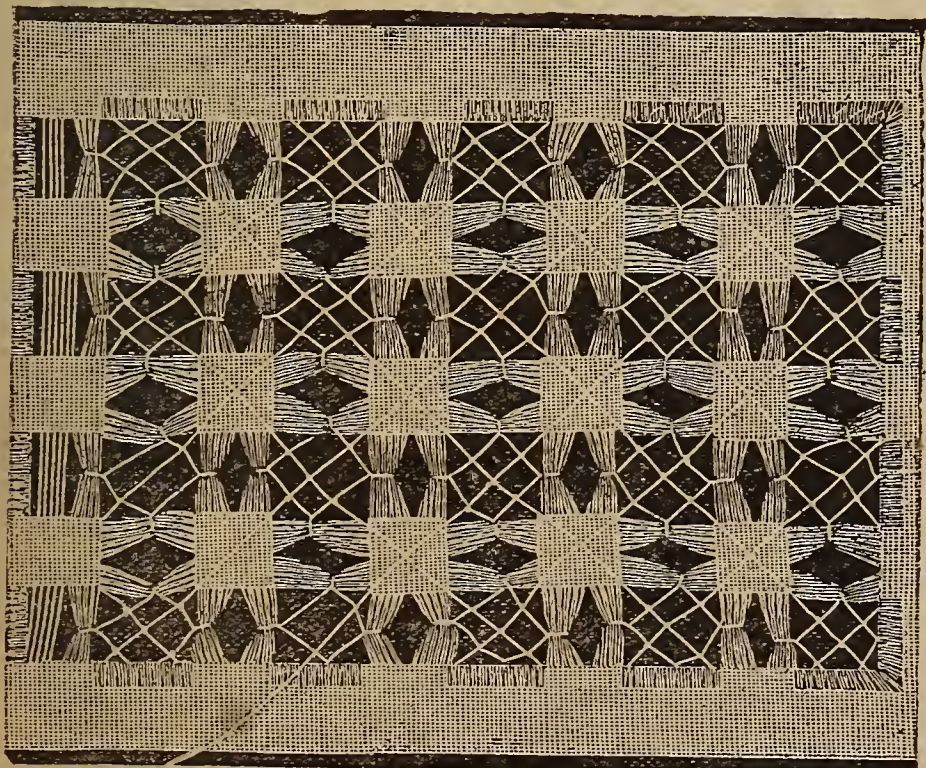
Take one width of cotton flannel or felt, one yard long, fold over into a bag, point the ends, making a slit under the upper flap, draw it through a large ring and decorate with bangles. A spider-web in tinsel may be sewn upon the lower end. The motto for this booth is, "A new broom sweeps clean."

SATURDAY.—Here all kinds of cakes, pies and doughnuts are for sale; also, ice cream, their motto being, "The way to a man's heart." In connection with it a supper can be served, also, but this would entail a great deal of work.

Another one was called a "shingle social," which meant that upon a shingle all the supper was served, as it would hold a cup of coffee and other eatables much more conveniently than anything else. It was a very enjoyable affair.

BETTINA HOLLIS.

One person in each locality can earn a good-sized bag of gold at work for us during the next few months. Some earn \$20 a day and upwards, and all get grand wages. No one can fail who follows our directions. All is new, plain and easy. Experience not necessary. Capital not required, we start you. Either sex, young or old. You can live at home, giving work all your time or spare time only. One person has earned \$2000 during past few months, you can do as well. No room to explain here. Full particulars and information mailed FREE to those who write us at once. Better not delay if you want work at which you will be sure of earning a large sum of money every month. STINSON & CO., Box 561, PORTLAND, MAINE.



WIDE BORDER.

border, button-hole the outer edges of such cuts as soon as possible and as neatly, as if left undone the edges will fray and their delicate beauty be destroyed. In cutting the slits in fine linen, a sharp pen-knife should be used, as the cut will be clearer than if made with scissors.

In drawing the threads for a border of any width, which is to be hemstitched or otherwise fastened on cloth edges, it will be found much easier to draw a few threads only on one side, hem that, and

When done, serve in the shell; dish out in spoonfuls.

HEIDELBERG CABBAGE.—Take a large, solid head of cabbage, cut in thin slices through the center. Put into a deep frying-pan a tablespoonful of grease. When hot, put in the cabbage with a teaspoonful of salt, half a teacupful of vinegar, one onion and half a dozen cloves; let cook two hours; if it dries before it is done, add a little boiling water.

SOUTHERN CABBAGE.—Chop a head of

Our Sunday Afternoon.

THE MOTHER'S BEST WITNESS.

In a court-room sat a mother,
Asking tearfully a name,
For herself and for her children,
And her head was bowed with shame.

"She's unworthy of her children,"
Said the father, with a frown;
"She's a dissipated creature,
She's a woman of the town!"

"I am not!" the mother answered,
Springing quickly to her feet;
"Here before my God, I swear it,
Whom I hope some day to meet!"

For a time the Judge sat silent,
Scarcely knowing what to do,
Wondering, as he weighed the statements,
Which was false and which was true.

Suddenly his face grew brighter,
And he turned from books away
To the eldest of the children
With the query, "Can you pray?"

What a question for a court-room!
True, but what an answer came!
Was there ever such a witness
As that trusting child of shame?

Kneeling in that crowded court-room,
Curious glances every where,
With the frankness of child nature,
Lisp'd she out the dear Lord's prayer.

Hearts were touched and eyes were moistened
Long before that prayer was done,
And the mother's condemnation
Stood as slander. She had won.

—Columbus (O.) Dispatch.

AN INQUIRY.

WHAT is truth? This question should be earnestly propounded by every Christian; but the mass seem content with the inquiry, what is popular? We should be willing to follow the truth irrespective of popular theology—let the truth be what it may or where it may. Tradition should not deter us from a scrutinizing search of this rare article, in this age of fables; the Savior in addressing the Father gives this general answer: "Thy word is truth." Then let us appeal to that word, holding ourselves in readiness to submit to its unequivocal testimony, however adverse to our preconceived sentiments. It is lamentably true that anything that will tickle the ear, by those unacquainted with the plain teachings of Christ and his apostles, is readily believed rather than truth. For instance, we hear proclaimed from the pulpit that man has an immortal soul that never dies; that as soon as the body dies the soul goes to heaven or hell, to await the great judgment day, when this mortal body will be resurrected and the soul brought back from heaven or hell, and soul and body reunited. Now, I must ask these modern theologians (wiseacres) where they get such doctrine. What does the Bible say in regard to immortality? It is declared in Gen. 2:7, that God formed man of the dust of the ground and breathed into his nostrils the breath of life, and man became a living soul, not an immortal soul: For it was dust and breath, the entire whole, That made a man a living soul.

But, again, what does the Savior say in regard to such teaching? Does he say that we must give account at death or at the judgment? Answer: Jesus never told us that we must give account at death, "but at the judgment."—Matt. 12:36. And now, I will write a few quotations for the many readers of FARM AND FIRESIDE, which they can look up for their own interest, in regard to the truth as it is in Christ Jesus.

Then, first, are saints recompensed at death or at the resurrection? Answer: They shall be recompensed at the resurrection. Rev. 11:18; Luke 14:14; Matt. 16:27; Rev. 22:12.

Second, are saints to be recompensed in heaven or on the earth? Answer: "Behold, the righteous shall be recompensed in the earth."—Prov. 11:31; Matt. 5:5; Rev. 5:10; Psalm 37:11; Dan. 7:27.

Third, are the dead conscious or unconscious? Answer: "The dead know not anything."—Eccl. 9:5; Psalm 146:4; Isaiah 38:18.

Fourth, are departed saints now celebrating the praises of the Lord? Answer: "The dead praise not the Lord."—Psalm 115:17; Psalm 6:5; Eccl. 9:6.

Fifth, are the patriarchs in heaven? Answer: "David is not ascended into the heavens."—Acts 2:34; John 3:13.

Sixth, have the prophets received their reward, or does it await them at the judgment? Answer: "The time of the dead that they should be judged, and that thou shouldst give reward unto thy servants the prophets."—Rev. 11:18; Psalm 17:15.

Seventh, have the apostles gone to heaven? Answer: "As I said unto the Jews, whither I go ye cannot come; so now I say to you [apostles]."—John 13:33; I. Tim. 6:16.

Eighth, are saints crowned at death or at Christ's coming? Answer: "When the chief shepherd shall appear, ye shall receive a crown of glory that fadeth not away."—I. Peter 5:4; II. Tim. 4:8.

Ninth, did Job expect to see his redeemer at death or at "the latter day," in heaven or "upon the earth," in a disembodied state or in his resurrected capacity? Answer: "I know that my Redeemer liveth, and that he shall stand at the latter day upon the earth, and though after my skin, worms destroy this body, yet in my flesh shall I see God."—Job 19:25-26; I. Thes. 4:16.

What a grand assurance that Christ who is our life will come back again to remove the curse that now rests upon the earth, and fit it up anew for his true believers, who are now asleep in Jesus, as well as all those who shall die in the faith of the gospel, or who shall be living upon the earth at his second advent.

Tenth, did David expect to be satisfied at death or at the resurrection? Answer: "I shall be satisfied when I awake with thy likeness."—Psalm 17:15; Phil. 3:20-21.

Eleventh, will the saints shine in the kingdom at death, or at the resurrection? Answer: "Many of them that sleep in the dust of the earth shall awake *** they that be wise, shall shine as the brightness of the firmament."—Dan. 12:2-3; Matt. 13:40-43.

Now, dear reader, don't get weary of the many scriptural texts on the immortality of the soul, nor don't let your feelings run away with your reason, for all scripture is given by "inspiration of God, and is profitable for doctrine, for reproof, for correction, for instruction in righteousness; that the man of God may be perfect, thoroughly furnished unto all good works."—II. Tim. 3:16-17.

Twelfth, did Christ promise to receive his saints unto himself at death, or at his coming? Answer: "I will come again and receive you unto myself."—John 14:3; Rom. 8:23.

Thirteenth, did the apostles groan for a disembodied state, or for the redemption of the body? Answer: "We ourselves groan within ourselves, waiting for the adoption, to wit, the redemption of the body."—Rom. 8:23; II. Cor. 5:4.

Fourteenth, when will the saints receive eternal life? Answer: "In the world to come, eternal life."—Mark 10:30; Luke 18:30.

Fifteenth, were the ancient worthies rewarded at death? Answer: "These all died in faith not having received the promises."—Heb. 11:13, 39, 40.

Sixteenth, will the soul come from heaven or the grave at the resurrection? Answer: "God will redeem my soul from the power of the grave."—Psalm 49:15; Psalm 89:48.

Seventeenth, does the soul die? Answer: "He spared not their soul from death."—Psalm 78:50; and in Psalm 22:29, David says none can keep alive his own soul.

Dear reader, don't think that I have exhausted the Bible for texts already referred to, for that would require months of search. I have only quoted these few passages of Holy Writ to show you that modern theology is subversive of immortality and of the scriptural doctrine of a judgment day, as it represents men going to heaven or hell before being judged, involving the idea of a future rally from heaven and hell to stand before the judgment seat of Christ, which would be like first hanging a man and afterwards trying his case. Neither the reward of the righteous, nor the damnation of the sinner, can be realized before the judgment. Jesus never told us that we must give account at death, but "They shall give

account in the day of judgment."—Matt. 12:36.


But to cap the climax in regard to the immortality of the soul, Paul very plainly shows the fallacy of such doctrine when he says, "The King of kings and Lord of lords; who only hath immortality, dwelling in the light which no man can approach unto, neither hath seen nor can see."—I. Tim. 6:15-16.

And now, this brings to mind that wonderful prophecy in Jeremiah xxxi, which was fulfilled by Herod in Matt. 2:16-18, in regard to his attempt to put Christ to death. Let us refer to this prophecy: "Thus saith the Lord; A voice was heard in Ramah, lamentation, and bitter weeping; Rachel weeping for her children refused to be comforted for her children, because they were not. Thus saith the Lord; Refrain thy voice from weeping, and thine eyes from tears: for thy work shall be rewarded, saith the Lord; and they shall come again from the land of the enemy." In the first place, this has reference to children dying, as revealed in Matthew's gospel, and in addition to this, Rachel, which represented all the mothers in Israel that lost their children, should look forward to the resurrection for the consummation of their hope; when their children would be brought again from the land of the enemy (not from heaven). Where is this land? It is where the grave is. Where is the grave? It is in the earth. Whose land is this? It is the enemy's. But who is the enemy? It is "him that had the power of death, that is, the devil."—Heb. 2:14.

You may be astonished at this conclusion, but you must bear in mind that we started out in search of a very rare article, truth, and if the Bible sustains us, then we are safe.

But again, Christ says, "Behold I make all things new, I create a new heaven and a new earth, wherein dwelleth righteousness;" and in regard to that beautiful city which Christ has gone away to prepare for his saints, John, the revelator, in his vision, says he "saw the holy city, new Jerusalem, coming from God out of heaven, prepared as a bride adorned for her husband." Where was that coming down to? Answer: The new earth, and will be the capital of Christ's kingdom. D. M. GRIFFITH.

Watch these columns next month for a Voice from New York



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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the querist should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Querists should not be written on paper containing matters of business, and should be written on one side of the paper only.

Tools for Mechanics.—O. S. R., Soak Creek, W. Va. Fine tools for mechanics are made by L. S. Starratt, Athol, Mass.

Self-cleaning Stable.—W. B., Union City, Ind. For circular of self-cleaning stable for cattle, send to Stewart Bros., Lake View, N. Y.

Cooking School.—E. W. M., Wellsville, Ohio. For information about the Philadelphia Cooking School, write to the principal, Mrs. S. T. Rorer, Philadelphia, Pa.

Nut Oils.—F. C. C., Dayton, Ohio, writes: "Mrs. A. W., who asked where there is a factory for making oil from hickory nuts, can probably find out by writing to Leo Bernard & Co., 228 Pearl street, New York, dealers in essential oils."

Raising Cauliflower Seed.—F. S. H., Honeoye Falls, N. Y., writes: "I have raised some extra fine Snowball cauliflower this season. How can I preserve the stumps to set next spring for seed?"

REPLY BY JOSEPH.—Cold-frame wintered plants, if set out very early and allowed to stand, will sometimes bloom and produce a little seed; but it is uncertain. The usual, and a reasonably sure way to raise seed, is to start plants in midsummer, winter the partially developed plants in cold-frame or cellar, and set them out in spring.

Manure for Potatoes.—J. N. F., Red Hill, Va., asks: "Is the following a good mixture for potatoes; namely, 7 parts South Carolina dissolved bone, 2 parts kainit, 9 parts hen manure?"

REPLY BY JOSEPH.—This mixture contains about 5 per cent available phosphoric acid, nearly 2 per cent potash and 1/2 per cent nitrogen, and may be valued at \$12 per ton. For Irish potatoes I would make the proportion of kainit much larger, say two or three times as much as in above formula, and then, I believe, it would be a pretty good manure. I shall be pleased to hear the results of the trials made with the above mixture in the various quantities as stated by you.

Drainage.—C. R. McN., Townsendville, N. Y., writes: "I have what is known as a hard-pan soil, good for grass, barley, oats, spring wheat, etc., but poor for corn. Now, what element should predominate in a fertilizer for my use?"

REPLY BY JOSEPH.—The probability is that your soil, like most other soils in your section of the state, needs underdraining, perhaps subsoiling. Where the land is inclined to be wet from springs, etc., no really good crops can be expected until the water level is lowered, and air admitted to the lower strata. This treatment will do more good, at present, than all the fertilizers you may apply; and when the land is once in proper shape, so far as drainage is concerned, a few fertilizer tests, such as suggested in recent issues of FARM AND FIRESIDE, will soon tell you what is most needed.

Growing Onions, Beans, etc.—J. L. M., Menomonee Wis., writes: "I have two pieces of new land, soil mostly rich mould with a little sand. Could I expect to raise a good crop of onions on it the same season I break it? How much seed per acre? What variety is best? How many bushels would be a fair crop?—What sort of white bean would be best to plant on it?"

REPLY BY JOSEPH.—A most excellent chance for onion growing, provided the ground can be got in good condition for sowing (cleared from all rubbish), and if it is reasonably free from weed seeds. As a rule, it is best to precede the onions with a crop of carrots, beets, cabbages or even potatoes to get the land in good shape, filled with plant food left from previous manuring, and to get it somewhat clear of weeds. Sow four or five pounds of seed per acre, preferably of the Yellow Danvers or Red Wethersfield varieties. A fair average crop is 400 bushels, but twice that number can be grown with good culture and under favorable conditions.—Any that you will have market for.

Stable Manure and Muck.—G. R. A., Locke, Mich., writes: "I have two pieces of clay loam, one having been in clover for two years, and now being covered by a fair stand of second growth; the other now in oats, having been well fertilized with fresh barn-yard manure last spring. My compost heap will reach only over one field. On which had I better apply it and at what time? Both fields are to be sown to wheat this fall, then to clover. I also have access to swamp muck, partially leached ashes and rotten sawdust. Can I use them to advantage and with a reasonable certainty of profit?"

REPLY BY JOSEPH.—The compost, if it cannot be made to reach over both fields, should, in my estimation, be put on the land which has not received a dressing of barn-yard manure last spring, and it may be applied to the ground before plowing, or if very fine, be used as a top dressing in late fall. With plenty of muck and partly leached wood ashes you have splendid material to make your own substitute for stable manure. If the muck is hard to get at, or not dry enough for present uses, scatter all the wood ashes you can get (without the muck) over your fields, and you may be sure it will pay you well. Muck and ashes will be the subject of an article on "Agricultural Chemistry." I do not think very much of sawdust as manure, unless it has become very thoroughly rotten. Then it may be applied as a top dressing, or put in with the compost heap.

Fertilizer for Wheat, Clover, etc.—Sowing Fertilizers by Hand.—S. D. V., New Holland, Ind., writes: "There is a fertilizer offered here at \$26 per ton, under the name of Prairie phosphate. The packages contain the following printed analysis: Ammonia, 1 1/2 to 2 per cent; phosphoric acid, 6 to 8 per cent; bone phosphate, 20 to 25 per cent. Is this good for wheat and clover; if not, where can I get a fertilizer that will suit my purposes?—Can a fertilizer be applied by hand broadcast?"

REPLY BY JOSEPH.—Your "Prairie phosphate" is valuable chiefly on account of its phosphoric acid (in the form of bone phosphate), and on account of its 1 or 1 1/2 per cent of nitrogen. It is neither a complete, nor by any means a high-grade fertilizer, and its value is in the neighborhood of \$14 or \$15. I would under no circumstances pay more than

\$20 per ton for it. If your soil needs chiefly phosphoric acid, of course, this will give you good results on wheat, and perhaps, on clover. If your soil needs potash, the Prairie phosphate alone will not do. Get some of the station bulletins containing analyses of fertilizers. You will find in them the addresses of the various fertilizer manufacturers, and the standard quality of their goods.—The easiest way to apply fertilizers for wheat, rye, etc., is to drill them in with the seed. But you can apply them also by hand in same way as you would land plaster. If the fertilizer is very dry, I find it much more convenient, and perhaps saving, to slightly moisten it before sowing. This is easily enough done by spreading a layer of the fertilizer on a tight, barn floor or in a box, then sprinkling it pretty thoroughly and putting another layer on the first, which is also sprinkled, etc. Then mix the whole thoroughly by shoveling over repeatedly, until the mass is evenly moistened all through. It can then be sown by hand broadcast, without the least discomfort or loss by being carried away with the wind.

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Querists must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Barrenness.—A. E. C., Kendall Mills, N. Y. There are cases of barrenness among all breeds of cattle, and I suppose nothing will be left but to convert the heifer in question into beef.

Stringhalt.—O. G. B., Weston, Mo., writes: "Will you please inform me if there is a cure for what we call stringhalt." **ANSWER.**—Once fully developed, there is not.

Slobbering.—L. A., Milford, Ohio. Unless your mare eats clover, and slobbers on that account, have her teeth examined by a veterinarian, and the cause, very likely, will be found.

Remedy for Sore Necks.—J. M., Rutland, Ill. Equal parts of lime-water and sweet oil, applied freely and frequently, will answer, provided the collar is kept scrupulously clean and the sores do not extend through the skin.

Flaxseed for Mares in Foal.—B. J. R., Adair, Mich., asks if flaxseed is injurious food for mares in foal.

ANSWER.—Flaxseed and flaxseed-oil cake are not considered injurious, but cotton-seed-oil cake is. It is claimed that it produces abortion.

Went Dry.—C. M. S., Rockport, Ind., writes: "My cow was giving two gallons of milk a day, and suddenly failed to half a gallon, and the next day she was dry. She is apparently as well as ever. She is a young cow with her first calf, and runs on wild pasture."

ANSWER.—May be she has learned to do the milking herself, or may be another animal, or possibly a person, has attended to that business ahead of you.

Dehorning Cattle.—H. C. L., East Dubuque, Ill. I regard the operation of dehorning cattle as an unnecessary and uncalled-for cruelty, which not only disfigures, but also to a certain extent cripples the animal. The advantages claimed to be derived from that operation are more imaginary than real, and at any rate, so insignificant that they do not at all compensate for the suffering of the animal, and the disadvantages which are a necessary consequence. I therefore shall, under no circumstances, do anything whatever to promote the dehorning craze just now in fashion, and must decline to answer your inquiries.

Too Phlegmatic.—G. A., Mechanicsburg, Ohio, writes: "I have an imported draft stallion, five years old, in good condition. He has always been a good breeder, but he will hardly tease mares at all. Is there any kind of medicine I can give him to make him accomplish the object desired?"

ANSWER.—Nothing can be gained by giving medicines, but if you change the diet of the animal, feed more oats, less corn, and no ground, cooked or steamed feed, and give more exercise, perhaps something may be accomplished. It is also advisable to keep such a phlegmatic animal not too fat.

Spavin.—H. P. S., Stone Fort, Ill., writes: "I have a valuable horse that has had the spavin for two years. I have tried the recipe in the 'Live-stock Manual' without effect. It would blister it and make it sore. Can it be cured, and what will cure it?"

ANSWER.—I do not know anything about the recipe of the "Live-stock Manual," and therefore cannot pass any judgment upon it. At present is not the time to treat spavin and ringbone. Wait until November, and you will find an article on the treatment of these diseases in these columns.

Snagged.—R. M. G., Murphy's Mill, W. Va., writes: "My yearling colt got snagged, as if a small stick had been jabbed against its left hind leg about half way between the pastern and hock joints. After remaining sore some time it healed up nicely, but a lump is growing on the bone about one and a half or two inches long, an inch or more wide, and protruding half an inch or more."

ANSWER.—You may succeed in somewhat reducing the enlargement by persistent bandaging, but you must renew the bandage at least twice a day; must put it on smooth and nice, and in invariably commence at the hoof. If you had bandaged from the beginning, hardly any enlargement would have appeared.

Splint—Wolf Teeth—Castrating Pigs.—O. H. B., Farmington, Ill., writes: "My three-year-old gelding has a large splint on one front leg. Shall I rub or blister it, or shall I leave it alone?—He has two wolf teeth that were broken off in the endeavor to extract them to prevent his eyesight from being affected.—Is the month of August an objectionable time for castrating pigs? Is there anything in following the signs of the moon?"

ANSWER.—You may do either, or let the splint alone.—Don't fool with wolf teeth; they are innocent.—August is not an objectionable time if the operation is properly performed, and there is no swine plague in the neighborhood. Don't be moony; it's lunacy.

Lolling Tongue.—J. S., St. Joseph. The first cause, in most cases, is an unsuitable bit, one that presses too little or too much upon the tongue. In your horse, it seems, it is a confirmed habit, and not much, if anything, can be done. In some cases it is caused by a partial paralysis of the tongue, which, again, may

have a different source in different cases. If your horse only did it when a bit is in his mouth, something, possibly, might be accomplished by using a bit suitable to the case, that is, a sufficiently straight one, if more pressure upon the tongue is required, or a sufficiently arched one, if the pressure upon the tongue is too great. But as your horse does it regardless of the bit, I hardly think that anything can be accomplished, except by an operation, which I cannot recommend.

A Callous (?) Swelling.—J. O. C., Danville, Ill., writes: "I have a valuable horse, five years old, which had the distemper two years ago. His throat gathered at one side, and I lanced it. When it got well, it left a callous place on one side of the windpipe, at the entrance to the throat, which, during warm or damp weather, affects his wind. Otherwise, unless he is running, it is not noticeable."

ANSWER.—Have your animal examined by a competent veterinarian. Your description conveys the impression that the animal is affected with heaves, and that the "callous place" on one side of the windpipe is nothing but an enlargement of the thyroid gland, which does not seriously affect the respiration. If such is the case, the callous place can be removed only by a rather dangerous surgical operation.

Periodical Ophthalmia.—L. M., Moonshine, Ill., writes: "We have a colt about two years old that has had trouble with her eyes. About three months ago her eyelids began to swell, and some said she had wolf teeth. We had them taken out but she is no better, only from her looks you could not tell she was blind. She cannot see out of one eye at all. Her mother was blind in one eye. Might it not be possible she inherited it?"

ANSWER.—Your colt, it seems, is affected with periodical ophthalmia, and in danger of losing the other eye, too. If not the disease itself, that is, the morbid process, at any rate, the predisposing causes must be considered as hereditary, and are very often transmitted by sire and dam upon their offspring. Therefore, animals affected with periodical ophthalmia, but especially such as are already blind with one or both eyes, should not be used for breeding.

Endeavors to Become a Cribber—Keeping Colts Shod.—L. G. S., Rockfield, Ind., writes: "What is the matter with our mare? For the last two or three years she takes spells of biting the neck-yoke while hitched up to the wagon. She grabs the neck-yoke with her teeth and raises it up and then lets it drop. She bites nothing else but the neck-yoke.—Is it advisable to keep colts at the age of two and three years old shod?"

ANSWER.—Your mare, it seems, falls into bad habits, and endeavors to become a cribber. If it is nothing but the neck-yoke she takes hold of, you may prevent it by tightening the check-rein, and by giving her sufficient exercise.—Whether a colt two or three years old should be kept shod, or shod at all, depends upon the kind of work it has to perform, upon the condition of the roads over which it has to travel, and last, but not least, upon the natural condition of its hoofs. If the latter are normal and healthy, if the work to be performed is simply farm work, there is no necessity for shoeing.

Abscess Formation in the Udder of a Mare.—S. L., Cannonsburgh, Pa., writes: "My mare's colt died when nine days old. Her udder became swollen, and the swelling reached up nearly to her front legs. It has now got down to about the size of a half-peck measure, and is running matter."

ANSWER.—Your mare should be kept on food that is not favorable to milk production; hence, should have no grass and no oats. She also should not get any more water for drinking than is absolutely necessary. The abscess in the bag should be thoroughly cleaned, and then be filled with absorbent cotton saturated with a two per cent solution of carbolic acid or some other antiseptic. This dressing should be renewed at least two or three times a day. If the opening into the abscess is too high, a lower one must be made by a downward cut, so that all pus and exudation can flow off without any hindrance. Still, it may be best that you call in a veterinarian.

Anthrithis—Care of Brood Mares.—H. M. S., La Moore, Dak. You describe a case of anthrithis, which, very likely, would have terminated in recovery, if it had been rationally treated. Poulting, especially, should be avoided in such cases. The treatment necessary has been given in a recent issue of FARM AND FIRESIDE.—You say, your mare's blood was out of order. Allow me to say once more, a brood mare must not be treated as an old work horse, if one wants a good, healthy colt. A brood mare, particularly during the last period of pregnancy, should not be compelled to do hard work, and not be used on the road at all, neither should she receive large quantities of heavy food, difficult of digestion, but a moderate, though sufficient, amount of perfectly sound food, easy of digestion. If this is complied with, and if the mare, besides that, is otherwise kept comfortable—is well groomed, and has a clean and well-ventilated stable during the night or in bad weather, and a spacious yard for exercise—there will be very little danger of anthrithis and kindred diseases in the colt, and condition powders—a great humbug, anyhow—can be dispensed with.

An Enlargement.—T. W. M., Oxford, Mo., writes: "I have a five-year-old gelding that has an enlarged place low down on his neck, first noticed about a year ago. It has gradually increased until now it is as large as a half-gallon measure. It cannot be seen except when his head is erect."

ANSWER.—Your description does not contain anything upon which a conclusion as to the nature of the enlargement can be based; neither do you indicate the exact place where it is. You merely say it is low down on the

neck. Therefore, if you wish to do something, and as the removal of the enlargement, if advisable, will very likely require the use of the knife, you will do best to call in a competent veterinarian. There are certain tumors or enlargements—for instance, an enlargement of the thyroid glands on each side of the larynx, and melano-sarcoma, frequently occurring in the parotic region of gray horses, which are better not interfered with.

Turns to One Side.—H. F. C., Goodland, Ind., writes: "My driving horse will pull out to one side of the road, and to keep him in the road I have to keep the wear line drawn tight. He travels with his head to the left, and the moment I loosen the left line he will pull over to the right side of the road, and even go in the ditch if I did not stop him. I drive him single, but he acts just the same when he is driven double."

ANSWER.—First, subject the bridle—not only the bit, but also the head-stall—to a close inspection, and see whether there is anything in the bridle itself—for instance, an unequal length of straps, that causes the horse to turn to one side. If the bridle is all right, and if the horse acts the same way with any bridle, then turn him loose and see if he will move in a circle without bridle or harness. If not, examine his mouth and his head and see whether there is any place where the pressure of the bridle causes pain. Also examine his poll for soreness, etc. If he also moves in a circle when loose, the possibilities, as far as I can judge, are limited to two—the horse either is blind in one eye, or there is pressure upon one side of the brain—very likely the cerebellum—inside of the skull.

A Chronic Respiratory Disorder—Brittle Hoofs.—E. S. M., Conneaut, Ohio, writes: "We bought a finely-bred mare one year ago last April, seven years old in May following, said never to have been sick a day. We are satisfied she never had been. The day we brought her home I noticed a discharge from the left nostril. The next day we heard her cough; the next day she seemed dumpy and lazy, and kept getting more so until she hated to trot at all. Small lumps came under her throat, and she coughed frequently, worse after drinking; cough deep and hoarse. When standing in the barn there was no discharge from the nostrils, but the harder driven and more warmed up the more discharge, white and lumpy, and quite profuse from both nostrils. Her appetite is good all the time. She seemed all right last winter. This summer, as warm weather came on, all the symptoms came back again, excepting swelling of throat. There are no lumps, but the discharge from nostrils is the same. She keeps in excellent flesh all the time.—What is the best way to treat dry, fevered and brittle hoofs?"

ANSWER.—Your mare, no doubt, suffers from a chronic respiratory disorder, but what it is, whether simply so-called "moist" heaves, chronic bronchitis, or something else, that, to decide, requires an examination.—The best way to treat dry, feverish and brittle hoofs is to give the animal rest, and to see to it that the weight of the body is so distributed upon the parts that can best sustain it, as to make the animal as comfortable as possible. If this can be done without shoeing, the animal should remain barefooted; if not, the same must be judiciously shod, perhaps, with a bar-shoe. In exceptional cases such hoofs may be artificially moistened, but it must be borne in mind, that such a moistening or poulticing is always followed by a reaction, and therefore has a tendency to cause the hoofs to become more dry and brittle. Indeed, most dry, brittle and degenerated hoofs are made that way by injudicious applications of moisture and by injudicious shoeing.

Barbed-Wire Wound.—G. F. G., Nevada, Mo., writes: "One of my horses got his right hind leg over a wire and was cut in the flank and across the front of the hind leg. At the joint the cut on the leg was very bad, one place being an inch or more deep on the inside and front. The leg at the hock is about three times as large as the other leg. He can walk on it some, but with a limp. He holds his leg up a good deal, and at times draws it up almost to his side. The sores heal up, but break out again and small particles like bone come out. His leg does not seem sore except in one or two places. His leg is bent out some, and makes him look knockkneed."

ANSWER.—I can make out this much from your rather lengthy description of the case: First, that the horse had too many kinds of treatment, but not the right one; second, that the swelling of the leg, although probably admitting some reduction, will be permanent; and, third, that the wounds, although apparently healed, yet contain some foreign body, and will, very likely, form abscesses and break open again. I, therefore, would advise you to have the horse thoroughly examined and treated by a competent veterinarian. Wounds caused by barbed wire are always irregular, and often more serious and deeper than they appear to be. Besides that, usually some dirt is introduced. Such wounds, therefore, require a careful examination, an exquisite cleansing, and a strict antiseptic treatment until perfectly healed. Any foreign body, or any loose or separated tissue, of course, must be perfectly removed. If such wounds are on the body, or in a place where the margins can be stitched together, this should be done. The kind of seton to be applied will depend upon circumstances. Where, however, the wounds are on a leg, especially on the lower part of the leg, or where a seton cannot be applied, bandaging, to be invariably commenced with at the foot, is indispensable. The antiseptics to be used—for instance, a carbolic acid solution, iodoform, or whatever may be chosen, according to circumstances—are usually best applied by means of absorbent cotton. The dressing, in all cases, must be renewed at least twice a day, and under circumstances, oftener.

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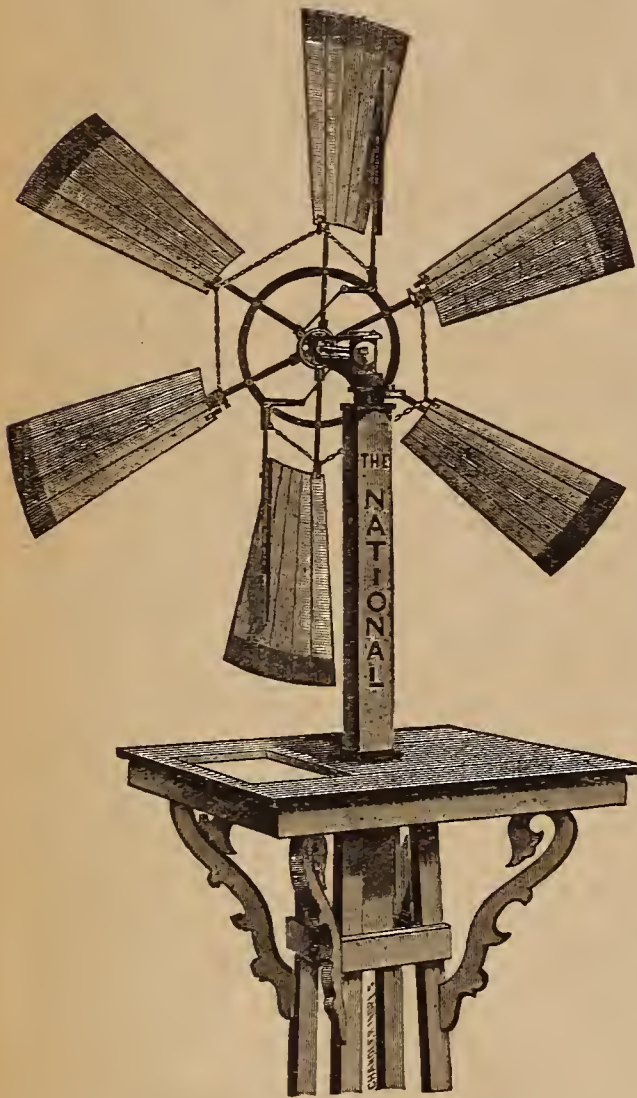


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governors instantly overcome a long, steel spring by means of a simple and effective device, and open all the sails simultaneously, in exact proportion to the force of the gust, allowing all the surplus wind to pass through the opened wheel. As the wind abates, the spring instantly brings all the sails simultaneously and proportionately back into the wind. Each of the sails is a spring balance scale, constantly weighing the wind pressure upon itself, constantly using an exactly equal amount of power, and constantly and exactly spilling all the excess.

The engine is so nicely adjusted in all its parts that it turns, when in gear, with the slightest atmospheric change, and in the direction of the lightest wind, always facing the wind and receiving its full force, thus running in the lightest breeze, and with the greatest power; and hence, when out of gear (no wind surface being exposed), the sails, acting as so many rudders, avoid the fury of the severest storms. It is especially recommended to farmers and stock raisers for grinding feed for stock, which it is warranted to do practically and successfully.

This new engine is receiving the most enthusiastic endorsement in all parts of the country. It is so simple in construction that it can be put up by any intelligent farmer.

Additional particulars concerning "The

National" may be had by addressing the manufacturers, Steel Pulley and Machine Works, Indianapolis, Ind.,

DAIRY RATIONS.

The Vermont station's annual report for 1887 contains, besides a lengthy account of the fertilizer inspection in the state, and the establishing and testing different forage plants in various sections of the state, much of value on the composition, digestibility and manurial value of the prominent and more common fodder articles. The use of tables is given in such a manner as to be of great help to those who are dealing with their practical application. Three pages are occupied with a list of rations made up from the tables and adapted for animals of different ages and kept for different purposes. They present the fundamental principles of stock feeding in a manner easily understood by the class they are intended to benefit. Some of the rations given are:

For a dairy animal 1,000 lbs. in weight. No. 3—3 lbs. cotton-seed meal, 4 lbs. corn meal, 4 lbs. bran, 9 lbs. hay, 9 lbs. corn fodder. No. 7—4 lbs. gluten meal, 5 lbs. wheat bran, 3 lbs. corn meal, 20 lbs. ensilage, 10 lbs. hay.

For heavy cows giving large quantities of milk; No. 14—4 lbs. corn meal, 2 lbs. cotton-seed meal, 4 lbs. wheat bran, 2 lbs. linseed meal, 10 lbs. straw, 10 lbs. clover hay. No. 18—3 lbs. cotton-seed meal, 2 lbs. bran, 30 lbs. ensilage, 17 lbs. hay.

For cows of ordinary Jersey size, 800 to 900 pounds: No. 26—1 quart cotton-seed meal, 1 quart corn meal, 3 quarts oats, 25 lbs. ensilage, 10 lbs. hay. No. 27—3 lbs. corn meal, 1 lb. cotton-seed meal, 1 lb. bran, 10 lbs. clover hay, 10 lbs. timothy.

For fattening cattle 1,000 pounds live weight: No. 32—6 lbs. linseed meal, 6 lbs. corn meal, 20 lbs. corn fodder. No. 33—5 lbs. cotton-seed meal, 5 lbs. corn meal, 20 lbs. hay.

A trial made at the station has substantiated the long-accepted idea that most of the strippings remain at the top of the milk-pail, and the necessity of thorough mixing of the whole to secure a sample that will rightly represent the quality of the milk. Nearly one per cent difference of fat was found between the milk at the top and bottom of the pail.—*New England Farmer.*

FOREST DESTRUCTION AND FLOODS.

The recent appalling occurrence in the Conemaugh valley is a forcible reminder of the intimate relations existing between forest destruction and floods. It is a lesson which should sink deep into the minds of all. This calamity, in connection with the disastrous inundation of the Ohio valley, some years ago, and the periodical overflowing of the Mississippi, all point to the inevitable consequences of reckless and extensive devastation of our mountain slopes. Although the breaking of the dam was the immediate cause of the late misfortune, the primary cause was the naked condition of the adjacent mountains, from whence came the deluge of waters in such volume that no human agency could withstand it. Had the mountains possessed their natural covering of timber and undergrowth, the descent of the storm water would have been gradual, with comparatively little resulting injury.

The dire event is full of warnings for this and other mountain districts. It teaches the urgent need of preserving the forests as a prime factor in retarding the flow of streams. In the Rocky mountain region, through the agency of the general government, steps are being taken preliminary to the construction of reservoirs and canals for irrigation purposes. The extreme danger of so placing reservoirs and dams that the retained waters become a menace to the country below should be

evident to all. Engineering skill and good sense should unite in the prosecution of all works for the storage of water.—*Colorado Springs Gazette.*

STEAM CULTURE.

There is no doubt that the introduction of steam, for the working of fallows, more particularly on heavy clay, should be more generally brought into use. There is the steam plow and scarifier, and the digger; the latter has been recently invented. The objections to the former implement are as follows: First, the expense of working the ponderous steam plow is very great, and as for purchasing the same, it is far beyond the ordinary farmer's reach. He may hire, it is true, but even then the outlay is great. Secondly, there is a common error made in working the ground too deeply with the steam cultivator, whether the shares or tines are used. Thus basins are made below the depth to which the plow has hitherto penetrated. These, more particularly on heavy clay soils, hold water in the winter, which materially damages crops. There is no objection whatever to clods of ordinary dimensions on the surface for wheat, but the huge boulders of clay that are sometimes brought to the top by stirring the earth over deeply are very injurious to plants. There is no danger of going too low with horse-power; indeed, I prefer taking an inch or so from the "hearth" when breaking up the land for summer fallow, or at any other time when no manure is buried. The digger has advantages over the foregoing implement; it costs much less, it works the land more lightly, and at less expense in the way of coal; there is less labor in drawing water. Altogether, it is a more handy implement, and it works the land sufficiently deep for breaking up the surface in a satisfactory manner. It would be to the mutual advantage of landlord and tenant if the former would keep a digger for the benefit of the latter. The land would be better worked and, indeed, would soon be improved to such an extent that farmers might make profits even in these depressed times. There is an advantage in steam implements which will always render them a necessary adjunct to the farmer—namely, that the fields can be worked at the nick of time, when the weather in our uncertain climate permits.—*Farm and Home, London, Eng.*

THE NEW CATTLE OR HORN FLY.

Many notes have appeared in the papers during last summer and the present summer concerning a new pest which is worrying cattle in Pennsylvania, New Jersey, Delaware, Maryland and northern Virginia. It is a small fly, half the size of a house fly, which settles in great numbers around the base of the horns and other portions of the body where it cannot be reached by either the tail or the head of the animal. It sucks a moderate amount of blood, reduces the condition of the cattle, and lessens the yield of milk from one third to one half. This new pest has been investigated the present summer by the Department of Agriculture, through the acting entomologist, Mr. L. O. Howard, who has succeeded in tracing the entire life history of the pest. He finds that the fly lays its eggs, usually at night, in freshly-dropped cow-dung, and that from the development from the egg through the maggot stage to the perfect fly again, a space of only twelve days is necessary. This rapidity of reproduction accounts for the wonderful numbers in which these flies appear, and it follows with reasonable certainty that the insect will pass the winter in the quiescent stage at the bottom of dung dropped late in the fall (the approximate date to be determined later). The preventive is obviously to lime the dung in the fall in places where the cattle preferably stand at night. At the present time applications may be made to milch cows and valuable animals which will keep the flies away. The applications may be (1) fish-oil and pine tar with a little sulphur added; (2) tobacco dust, when the skin is not broken; (3) tallow and a small amount of carbolic acid. The latter application will also have a healing effect where sores have formed.

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Our Miscellany.

TO STAY AT HOME IS BEST.

Stay, stay at home, my heart, and rest;
Home-keeping hearts are happiest,
For those that wander they know not where
Are full of trouble and full of care;
To stay at home is best.

Weary and homesick and distressed,
They wander east, they wander west,
And are baffled and beaten and blown about
By the winds of the wilderness of doubt,
To stay at home is best.

Then stay at home, my heart, and rest;
The bird is safest in its nest;
O'er all that flutter their wings and fly,
A hawk is hovering in the sky;
To stay at home is best.

—Longfellow.

BETTER to live in a log cabin all your own,
than in a brown stone mansion belonging to
somebody else.

BEECHAM'S PILLS act like magic on a weak
stomach.

BETTER to let your wife have a fit of hysterics
than to run into debt for ulce, new furni-
ture, or clothes, or jewelry.

A WOMAN generally does not know how to
drive a nail, but she knows how to wheedle a
man into driving it for her.—Somerville Journal.

BETTER to meet your business acquaintances
with a free, "don't-owe-you-a-cent" smile,
than to dodge around the corner to escape a
dun.

AN ORGAN IN EVERY HOME.

The firm of Marchal & Smith commenced
selling organs direct to the people (thus sav-
ing their customers the cost of middlemen's
profits) in 1859. The excellencies of their or-
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made their trade to-day the largest direct deal-
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who need an organ, whether for home, school
or church, cannot do better than address these
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street, New York.

We firmly believe in curtailing and prohib-
iting unnecessary work on Sunday on the dem-
onstrable fact that man and beast need one
day in seven for rest. Public sentiment will
welcome the change because it is a step toward
the proper observance of the Sabbath as a day
of rest. It cannot but work to the advantage
of the laborer, physically and morally.—Pitts-
burg Post.

A MERE HABIT.

People do not cough when they are intensely
interested. A well-known orator has been
seen to hold an audience spellbound on a cold
January night, with fog and frost without,
but the men and women of the vast auditory
had left their coughs at the door. They were
by no means so comfortable as the occupants
of pews; they were jammed against each
other like sardines in a tin; but the magic of
genius grasped them fast, and not a cough,
a murmur, or a sound escaped them. In our
theatres, also, when notable people are acting,
the gallery would half strangle anybody who
dared to cough, and nobody feels inclined
thus to disturb the performance. It seems
clear, therefore, that in most cases, coughing
is merely a nervous habit, to be struggled
against and cured.

Recent Publications.

EXPERIMENT STATION BULLETINS.

ALABAMA.—(Auburn) July, 1889. Grasses and
their cultivation.

ALABAMA.—(Canebrake Station, Uniontown)
July, 1889. Experiments with oats and wheat,
and meteorological report.

FLORIDA.—(Lake City) July, 1889. Analyses
of water, soils, etc.

INDIANA.—(Lafayette) August, 1889. Field
experiments with wheat.

KANSAS.—(Manhattan) July, 1889. Experi-
ments with wheat.

KENTUCKY.—(Lexington) July, 1889. Com-
mercial fertilizers.

MARYLAND.—(Agricultural College P. O.)
March, 1889. The station's experiment orchard.

MISSISSIPPI.—(Agricultural College P. O.)
May, 1889. The use of fertilizers.

NEW JERSEY.—(New Brunswick) July 15, 1889.
Analyses and valuations of fertilizers. Special
Bulletin F, July 26, 1889: The Horn Fly. Special
Bulletin G, August 7, 1889: The Potato Rot.

NEW JERSEY.—(New Brunswick) July, 1889.
Experiments with different breeds of dairy
cows. August, 1889: Analyses of incomplete
fertilizers.

NEVADA.—(Reno) June, 1889. Meteorological
report.

NEW YORK.—(Cornell Station, Ithaca) Au-
gust, 1889. On the effect of different rations in
fattening lambs.

SOUTH CAROLINA.—(Columbia) July, 1889.
Hog cholera.

TENNESSEE.—(Knoxville) July, 1889. Cotton-
seed hulls and meal as food for live-stock.

U. S. DEPARTMENT OF AGRICULTURE (Wash-
ton). Experiment Station Bulletin No. 8:
Report of meeting of horticulturists of experi-

ment stations at Columbus, Ohio. Circular
No. 8: Section of vegetable pathology, experi-
ments in the treatment of pear leaf-blight
and apple powdery mildew.

VERMONT.—(Burlington) No. 15, June, 1889.
Analysis of hay. No. 16, July, 1889: Testing
milk at creameries.

WISCONSIN.—(Madison) July, 1889. Noxious
weeds of Wisconsin.

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all, and, of course, all such will be counted as
two subscriptions.

Names of subscribers should be sent in
promptly as soon as secured, and an account
will be kept with each agent until the end of
the contest. Less than 4 names received at one
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paid in premiums. Don't go into the work in
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until you have their names in your club. Vim
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This Company, incorporated with an authorized capital of \$200,000, own and control 10,000 acres of land in and around Leroy, Marion County, Florida. To enhance the value of all this land by large and diversified ownership, the Company propose to give away a portion of this property in cottage sites and live, tea, twenty and forty acre tracts, suitable for orange grove and vegetable culture, and to those who accept this offer and send their name and address we will send a

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No charge whatever is made for the Land, but we require all to send 25c. Postal Note or Cash, or \$50c. in Stamps, when application is sent for the deed bond. This amount is a pro rata charge to help pay for this advertisement, post ge, and also a handsomely illustrated book on Florida, its climate, soil, orange culture, etc., and is in no sense a charge for the deed bond or the land it calls for. You are not obligated to have the deed executed if the location or land does not suit you, and the 25 cts. expense will be returned in such case.

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REFERENCES: Ocala Banner, Ocala, Fla.; Marion Free Press, Ocala, Fla.; J. Y. BETTYS, Leroy, Fla.; J. B. STIDWELL & Co., New York; Miss LILLIE A. EMMONS, Deep River, Conn.

Col. J. W. WHITE, Ex-County Surveyor, Ocala, Fla., all of whom are acquainted with Leroy.
Address: **THE CO-OPERATIVE LAND AND IMPROVEMENT COMPANY,**
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IN FLORIDA. THE SILVER SPRINGS, Ocala AND GULF RAILROAD runs through it. Splendid Hotel, Depot, Stores, Saw Mill, Cash and Blind Factory and Cottage already built.

Over 10,000 people now own property there, and hundreds of new settlers coming in every year. It is estimated that 200 houses will be built there during the winter, besides a large Sanatorium, Church and School-house, and the Farmers' Alliance Stores which will make Leroy a great centre for shipping all kinds of fruits and farm products. House lots are now selling as high as \$100, and five-acre orange grove tracts, \$250.

Rural Free Press, Ocala, Fla., says: "The land is high, rolling pine, and considered equal to any pine lands in the State. Any of the semi-tropical fruits, such as oranges, lemons, lime, banana's, pineapples and guavas do as well on pine lands as hummock."

The Ocala Enquirer says: "The lands are high, dry and rolling, and LEROY is one of the finest and healthiest locations in the State, and all that the Company claim for it is strictly within the bounds of facts."

CLIMATE AND HEALTH.

The climate of this section is unsurpassed by any in the world, not even excepting Italy. Cool, balmy, delightful breezes are constantly blowing between the Gulf and the Atlantic. This immediate neighborhood is well adapted for a Summer as well as a Winter resort.

MONEY LOANED. This Company is prepared to loan money for improvements upon property secured from the Company, giving five years to pay for same. Plans of houses will be furnished free upon application to those wishing to build.

LOCAL CLUBS. To those wishing to form clubs in their town we will send five warranty deed option bonds for \$100; ten for \$200; fifteen for \$300; twenty-five for \$500; forty for \$800; fifty for \$1000. No more than fifty will be sent to any one club.

WRITE TO-DAY. Before free property is all taken, send in a club, and have your friends interested with you. If free property is all taken when your order is received, money will be returned. Send money by Postal Note, Money Order, or Registered Letter.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammoncton, New Jersey.

DISEASES OF BROODER CHICKS.

Incubator chicks come out of the shells strong and active, as is admitted by all who have tried artificial methods. For the first few days the chicks seem to thrive and do well in the brooder, and then the trouble begins. Before the chicks are a week old they are affected with bowel disease, which is usually supposed to be the result of improper feeding. The food is seldom the cause of the difficulty. In fact, chicks are fed too highly by some, and only simple food should be given. The ordinary rolled oats, with a box of granulated (pin-head) oatmeal or wheaten grits, is ample for the first few days. The cause of bowel disease is due to lack of warmth. Chicks are really naked when hatched, as the down is no protection. They can stand a cold nearly down to freezing point, but they must be able to get into an atmosphere of 95 degrees whenever they wish, or they will succumb. If they get chilled at any time it affects them by causing cold on the bowels, no matter how warm and comfortable they may be kept afterwards. If the weather becomes damp, even if not cold, the chicks must have plenty of warmth in the brooder, and at night, under no circumstances, must the chicks crowd. If the brooder is warm the chicks will separate, and not huddle together, sleeping on the edge of the brooder.

Should they congregate to the center of the brooder there is a lack of warmth. No thermometer is needed, for by observing the chicks their actions will guide you in regulating the warmth.

As we have received several inquiries, asking "what ailed my chicks," and as the season for artificial incubation is nearly here, we give the following rules for the management of brooders and chicks:

1. Feed chicks nothing the first 24 hours; then give granulated oatmeal four times a day, in a little trough. Cook a mixture of equal parts corn meal, bran, ground oats and wheat middlings into bread, and feed twice a day. This means feed every two hours. Not much but often. Continue the food until two weeks old, and then keep wheat before them, giving the other food three times a day.



FIG. 2.

Mashed potatoes daily, a little chopped meat twice a week, and any variety will do until they are a month old, when the ground food should be scalded, and wheat and cracked corn kept before them.

2. Always keep the brooder warm, especially at night and on damp days.

3. If bowel disease appears, or the chicks crowd, it indicates lack of warmth.

4. If chicks look sleepy, or have fits, search for large lice on heads and throats.

5. Keep a box of charcoal, sharp sand or fine gravel, and plenty of dry earth (for dusting) where they can reach it.

6. If they have leg weakness, and appear rough, it indicates bottom heat is too high. The heat should come over them. If they fall on their knees, legs seem long, but appetites good, it indicates rapid growth, and is not fatal.

7. Too much meat, or hard-boiled eggs, will cause bowel disease.

8. Give plenty of water and keep the brooders clean. Chicks must never become, in the slightest degree, wet.

ECONOMY IN FENCING.

The nearer we approach to a square form, in fencing off yards for poultry, the lower the cost of the fence in proportion to area of ground enclosed. In order to point out the defects of some of the methods used, we present the ground plans of yards, A representing the positions of the houses.

Figure 1 shows an area of 10,000 square feet of ground, enclosed (without the division fences, with only 400 feet of fence. Leaving out the spaces occupied by the houses, a a, we have four yards, each 50 by 50 feet, containing 2,500 square feet, enclosed by 600 feet of fence.

Figure 2 shows the houses, a a a a, in one row, the yards being 10 by 100 feet each. Only one half as much ground as enclosed in Fig. 1, yet there is required

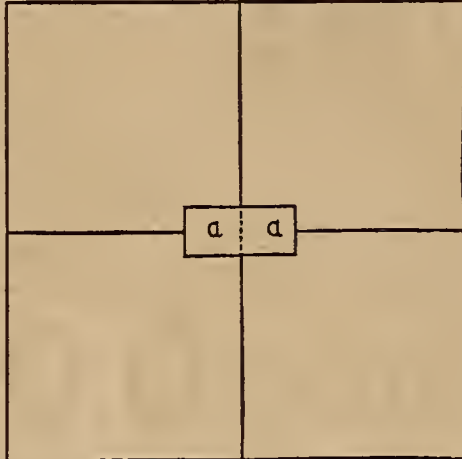


FIG. 1.

700 feet of fence. If only four yards are enclosed the fence would be 600 feet. Estimating the space for four yards instead of five, each yard would contain only 1,250 square feet, yet the cost of the fence is equal to the square yards shown in Fig. 1, though the square yards contain 2,500 square feet.

Figure 3 shows a yard 10 by 100 feet, giving a space of 1,000 square feet. By simply adding 10 feet more of fence at each end of the yard, and moving one side of the fence to the dotted lines, the area is doubled, the yard then being 2,000 square feet, yet only 20 feet of fence has been added.

CHOP THE GRASS AND HAY.

The greatest of all difficulties with poultrymen is that of providing green food in winter, but within the last few years it has dawned on poultrymen that if hay be cut into half-inch lengths, and scalded, it makes as serviceable food for hens as for animals. Following this, inventors have produced novel little hay cutters (some of them small enough to be carried in a large, overcoat pocket), which enable the poultrymen to cut their hay rapidly and of exactly the proper length.

KEROSENE EMULSION.

There are many kinds of substances for destroying lice, but the cheapest is a kerosene emulsion. Now, kerosene will not mix with water, but it does not refuse to mix with soapsuds. Ordinary soapsuds will not answer—the suds must be very soapy. When the clothes are taken out of the boiling water, add more soap, shaved fine, and for a wash-boiler of suds add one quart of kerosene. With a sprinkler apply the mixture to every spot that will afford a harboring place for lice, and it will destroy them instantly.

NOW IS THE TIME TO BUY.

Again we call attention to the fact that if you wait until next spring to buy pure stock you will be unable to procure anything but males, as females are usually scarce at that time and prices high. Buy now, while the breeders' yards are full, as they can satisfy you better than at any other period.

SURPLUS FOWLS.

If the prices are low, use the fowls at home, on your table, instead of paying freight to market and taking the chances of an overstocked stall. The admonition here given has been mentioned before, but just at this time, when the flocks are being thinned out, it is worthy of being repeated.

J. C. SIMPSON, Marquess, W. Va., says: "Hall's Catarrh Cure cured me of a very bad case of catarrh." Druggists sell it, 75c.

ECONOMIZING WITH TURKEYS.

The amount of grain, young weeds, grass and other material (and we may add, insects) that are wasted on the farms of this country is enormous, and yet it might be saved by keeping turkeys. Turkeys require no food from the granary at this season, and being industrious foragers, will seek and discover every eatable thing that can be converted into meat for market. If a weed or an insect can be utilized, the farmer saves its equivalent of food, and there is no farm that does not suffer loss from shaken grain, which is left on the stubble fields. Not only will the turkey convert the insects into a marketable product, but it reduces them in number, and thereby, to a certain extent, protects the crops the next season. With the exception of the extra care necessary to carry them beyond the critical stages, when young, the turkey entails less labor, and gives a larger profit in proportion to cost, than any other class of poultry, but they are best adapted to large farms that afford plenty of room for them to range upon. A large flock of turkeys will consume bushels of insects in a season, and the aid they give in that respect is alone worth their keeping.

THE NEST-EGG.

This is the season when the chance nest-egg will find its way into the egg-basket, despite all precautions, and the only way to avoid such a nuisance is to make it a rule not to use stale eggs as nest-eggs. No one who resorts to, or allows, such a filthy method, will ever build up a reputation for selling strictly fresh eggs.

WIRE FENCING.

Wire makes an excellent summer fence, and though not easily blown down in winter, yet it is too open for cold climates. The lower portion of a wire fence should be of boards, three feet high, to serve as a windbreak, or, what is better, the north side of the fence should be entirely of boards.

INQUIRIES ANSWERED.

Results of Indigestion.—Mrs. D. J. B., Manchester, Neb., writes: "I have lost several hens, lately. On examination I found a large sac, the size of a pint bowl, attached to the gizzard, allowing the food to pass into the sac. There was no sand or gravel in gizzard. All died in the same way. Fowls have a run, with free access to corn, wheat, oats, etc."

REPLY:—Result is due to overfeeding and fatty degeneration, leading also to indigestion and its resultant diseases. On some soils no gravel can be found. At this season fowls should have but limited grain food.

Cholera.—C. B., Lawrence, Kan., writes: "Please give me a remedy for cholera?"

REPLY:—There is no sure remedy known, but excellent success has attended the treatment mentioned in former issues of adding a teaspoonful of carbolic acid to three pints of water, and allowing nothing else as drink.

Gapes and Bumble Foot.—O. E. S., Fairdale, Pa., writes: "I would like a remedy for gapes, and, also, how to treat bumble foot on fowls."

REPLY:—A drop of spirits of turpentine on a bread crumb, forced down the throat, is the best remedy for gapes. It comes from dampness and decaying vegetable matter, which fosters the gape-worm. Bumble foot is due to injury by jumping from high perches.

Prices of Broilers.—L. B., Jefferson, Wis., writes: "How do the prices of broilers compare between Chicago and New York, and at what period do broilers bring the best prices?"

REPLY:—April and May are the months when broilers sell high, some seasons the prices being as high as 60 cents per pound, but 40 cents is the average highest price. Chicago prices are but little lower than those of New York, but May is the better month in Chicago and April in New York.

WELLS, RICHARDSON & CO'S IMPROVED

Butter Color.

EXCELS IN STRENGTH PURITY BRIGHTNESS

Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color. For sale everywhere. Manufactory, Burlington, Vt.

MONITOR INCUBATOR Best Improved of any made. Illustrated circular for stamp. A. F. Williams, Bristol, Ct.

POULTRY FOOD!

[Trade Mark]

HOLLIS' CANNED MEAT for POULTRY Will make Hens Lay!

Will make Chickens Grow!

AND GOOD FOR MOULTING FOWLS.

This food is strictly fresh meat, carefully cooked, ground fine, seasoned and hermetically sealed in 8-oz cans. Being ground fine, it can be readily mixed with soft food and fed so as to give each fowl an equal share. Price, 30 cents per can; \$3 per dozen. Address **HOLLIS DRESSED MEAT & WOOL CO.**, 20 North Street, Boston, Mass. Mention this paper.

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Have you One Hundred, One Thousand, or Five Thousand Dollars? You can multiply it by ten in one year by getting the sole agency for our watches in your city. We guarantee you absolutely against loss, supply advertising matter free, give exclusive agency, sole use of our club forms, and protect you from competition. You know that our Keystone Dust-Proof Watches contain everything essential to accurate time keeping in addition to numerous patented improvements found in no other watch. They are the Best and our prices the lowest. No one else can give you one-tenth the advantages we offer. Write at once for full particulars before your town is taken. We refer to any commercial agency. Capital, \$300,000. Full Paid. **THE KEYSTONE WATCH CLUB CO.** 904 Walnut St., Philadelphia.

**2,100 DOZEN FREE!**

2,100 Dozen pairs Ladies fine Fall and Winter Hosiery given absolutely free to introduce the Household Companion. They are heavy, warm, well made, fashionable goods, in solid colors, stripes, checks, all the popular shades of cardinal, navy blue, seal brown, black, slate tan, in fact style and colors to suit all tastes. Don't pay \$5 to \$6 for a pair of Fall and Winter hose when you can get a dozen for nothing. The old reliable Household Companion, of New York, is a complete family paper, richly illustrated, containing serial and short stories, romances, sketches, wit, humor, fashion, household hints, stories for children, etc., & ranks among the first Metropolitan Journals. Positively the entire lot (2,100 doz.) to be given away during the next 60 days. We also send the Household Companion 6 months free to 2,100 persons who will answer this advertisement and send us the address of 20 newspaper readers from different families. For 15 cts. in silver or stamps, to help pay postage, packing, etc., we send every subscriber the fine hosiery described above. To the club-raiser, or for the list of 20 subscribers, we send 1 dozen pairs of these beautiful and useful articles. We are determined to lead the race in premiums, hence this liberal inducement. It is a colossal offer and will not appear again. If you want a dozen fashionable, fine hosiery sent free, and names of 20 newspaper readers, and you will receive the paper and hosiery premiums according to above offer by return mail. State size and color wanted. address Household Companion, 257 Broadway, N. Y.

This Offer Was Never Equalled!

WATERFORD, OHIO, July 30, 1889. I have received the beautiful picture, "Christ Before Pilate." I would not take \$10.00 for it and run the risk of getting another like it. **MRS. SARAH LADY.**

HILLSDALE, IND., July 19, 1889. I received your beautiful picture, "Christ Before Pilate," and am greatly pleased. I would not take \$10.00 for it if I could not get another. **MARIA HARVEY.**

MAKE HENS LAY NOTHING ON EARTH WILL MAKE HENS LAY LIKE **Sheridan's Condition Powder.** WE SEND BY MAIL **A LARGE 2 1/4 POUND CAN FOR \$1.20** TWO SMALL PACKS 50 CTS POST PAID. **Sheridan's Condition Powder**

is absolutely pure and highly concentrated. One ounce is worth a pound of any other kind. Strictly a medicine, to be given in the food, once daily, in small doses. Prevents and cures all diseases of hens. Worth its weight in gold when hens are moulting, and to keep them healthy. Testimonials sent free by mail. Ask your druggist, grocer, general store, or feed dealer for it. If you can't get it, send at elegantly illustrated copy of the "FARMER'S POULTRY RAISING GUIDE" (price 25 cents) tells how to make money with a few cents, and two small packages of Powder for 60 cents or, one large 2 1/4 pound can and Guide, \$1.20. Sample package of Powder, 25 cents, five for \$1.00. Six large cans, express prepaid, for \$5.00. Send stamps or cash. **L. S. JOHNSON & CO., 22 Custom-House Street, Boston, Mass.**

personally acquainted with Mr. Stoddard, and know that any communication to him will receive prompt and careful attention." Say where you saw this adv.

The Markets.


	CHICAGO.	NEW YORK	N. ORLEANS
BUTTER.—			
Fancy Creamery...	20 @ 21	20 1/2 @ 21	24 @ 25
" Dairy.....	16 @ 18	17 @ 18	12 1/2 @ 14
Common.....	8 1/2 @ 9	7 1/2 @ 10	
GRAIN.—			
Wheat No. 2 spr'g	76 1/2 @ 77 1/2		
" No. 2 w'nt'g	@ 77	83 1/2 @ 83 3/4	
Corn.....	32 1/4 @ 33 1/4	42 1/4 @ 43 1/4	43 @ 46
Oats.....	18 @ 23 1/2	25 @ 28	28 1/2 @ 30
LIVE STOCK.—			
Cattle, Extra.....	4 50 @ 4 65	4 70 @ 4 85	
" Shippers.....	2 65 @ 4 40	3 40 @ 4 65	2 00 @ 3 00
" Stockers.....	1 60 @ 3 00		
Hogs, Heavy.....	3 60 @ 4 20	4 30 @ 5 25	3 00 @ 5 50
" Light.....	3 95 @ 4 75		
Sheep, com. to good	4 00 @ 4 25	5 00 @ 5 25	2 00 @ 3 50
" Lambs.....	5 50 @ 5 75	6 50 @ 7 25	
PROVISIONS.—			
Lard.....	6 00	6 35	6 12 1/2
Mess Pork.....	10 50 @ 10 40	12 50 @ 13 00	12 00 @ 12 25
SEEDS.—			
Flax, No. 1.....	1 29		
Timothy.....	1 30	1 55 @ 2 00	
Oats.....	3 75 @ 4 00	4 50 @ 5 10	
WOOL.—	CHICAGO.	BOSTON.	ST. LOUIS.
Fine, Ohio & Pa.		34 @ 35	
" Western.....			
" Unwashed.....	16 @ 23		
Medium, Ohio & Pa.		33 @ 34	
" Western.....	30 @ 32	29 @ 31	
" Unwashed.....	24 @ 27		
Combing & Delaine		35 @ 40	
Coarse & Black.....	20 @ 22		

Our New Cart, "The Derby," just patented. Perfection at last. Free Catalogue. Write the Anderson & Harris Carriage Co., ELWOOD PLACE, O.




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Knuckle Joint & Screw Presses, Graters, Elevators, Pumps, etc. Send for Catalogue. Boomer & Boschert Press Co., 99 W. Water St., Syracuse, N. Y.



GRIND YOUR OWN

Bone, Meal, Oyster Shells, Graham Flour & Corn, in the \$5 HAND MILL (Patent). 100 per cent. more made in keeping poultry. Also POWER MILLS and FARM FEED MILLS. Circulars and testimonials sent on application. WILSON BROS., Easton, Pa. Mention this paper.



NOYES ROAD CART.

If you want the best, buy the Noyes. We make the largest variety of Carts. If the dealer in your town does not handle our Cart, write for prices. They ride the easiest, and will outlast any cart made. Address NOYES CART COMPANY, R. Arthur Stone, Manager, Kalamazoo, Mich. Mention this paper.



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LATEST IMPROVED MACHINES in the MARKET. It pays to get our Illustrated Catalogue and Price on Tread and Sweep Power, Threshers, Separators, Corn Shellers, Feed Cutters with Crasher, Land Roller, Engines, three to ten Horse Power. S. S. MESSINGER & SON, Tatum, Northampton Co., Pa. Mention this paper.



Pennsylvania Agricultural Works, York, Pa.

Farquhar's Standard Engines and Saw Mills. Send for Catalogue. Portable, Stationary, Traction and Automatic Engines a specialty. Warranted equal or superior to any made. Address A. B. FARQUHAR & SON, York, Pa. Mention this paper.



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Our Improved 1889 Cutter contains many new and valuable features. Strong and durable, easy to operate, not liable to accidents. Treatise on Ensilage and Catalogue, also Plans for Silo, Free. SILVER & DEMING MFG. CO., Salem, O. P. P. Mast & Co., Philadelphia, Pa., Eastern Agents. Mention this paper.



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Separate Hopper for Small Grain. 3 Sizes. The only really successful CORN and COB MILL made for small powers. Can be fed according to power. Our 26 sizes American and Hero Mills—too well known to need remarks here. 22,000 NOW IN USE. Send for handsome Descriptive Catalogue and special prices of our Corn and Cob Mills, Hero Mills and Horse Powers, Feed Cutters, Wood Saws, etc. APPLETON MFG. CO., 19 & 21 So. Canal St., CHICAGO, ILL. Mention this paper.

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DO YOU WOULD WE DAILY

YOU IS IT NOT WORTH

WEAR COULD WE TAKE PANTS ORDERS

that Plymouth Rock Pants and Suits would have reached the largest sales ever known in the custom clothing business unless they had wonderful merit?

receive unsolicited letters testifying to their worth if such praise was not deserved?

a postal card to see a handsome line of our samples, mailed you free, with full directions how to measure yourself, we guarantee perfect fit and satisfaction or money refunded?

In the big cities where our branch stores are situated unless we could successfully compete with any tailor or ready-made clothier?

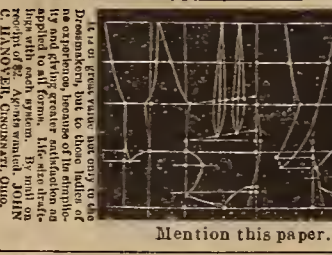
CUT TO ORDER: Pants, \$3 to \$5.25; Suits, \$13.25 to \$21; Overcoats, \$10.25 to \$20.

If you don't know who we are, look in any commercial agency, or write to any bank or business firm (except clothiers and tailors) in any of these cities.

PLYMOUTH ROCK PANTS CO.

ADDRESS ALL MAIL TO
Headquarters: 11 to 17 Elliot Street.
Annex: 695 Washington Street,
And 18 Summer Street, Boston, Mass.

BRANCHES: 285 Broadway, New York; 943 Penn. Avenue, Washington, D. C.; 72 Adams St., Chicago, Ill.; 914 Main St., Richmond, Va.; 225 E. Baltimore St., Baltimore, Md.; 110 Canal St., New Orleans; 104 Montgomery St., Montgomery, Ala.; 39 Whitehall St., Atlanta, Ga.; Burnside Building, Worcester, Mass.; Hotel Gilmore, Springfield, Mass.; 60 Market St., Lynn, Mass.; 198 Westminster St., Providence, R. I.; Old Register Building, New Haven, Conn.



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FARRAND & VOTY

ORGANS

DETROIT, MICH. U.S.A. Mention this paper.



FRANK'S American Wonder Machine.

Awarded highest medals. Approved of and found O. K. by the highest Dairy Faculties. Child can use it. Produces finest granular butter from sweet milk or cream in 2 minutes. Works from 1 pint up; makes 80 to 120 per cent. more butter. Buttermilk remains perfectly sweet. Recommended by children's physicians as best Baby Food. Machine also makes finest Ice Cream in 4 min. No. 1, \$3.50; No. 2, \$4.50; No. 3, \$5.50. Send for circulars to F. A. Frank & Co., Patentees and Sole Manufacturers, 316 E. 83d St., New York. Reliable agents wanted. When you write, mention Farm and Fireside.



Austin Steam Generator

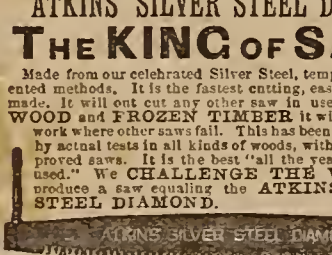
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Heating Water, Slaughtering, Cooking Feed, Creameries, Laundry and Bath Use, Canning Factories, Cheese Factories, Greenhouses, Heneries, &c.

Send for catalogue of Feed Cutters, Feed Mills, Stock Supplies. F. C. Austin Mfg. Co., Carpenter & Carroll Ave., CHICAGO, ILL., U.S.A.



KEYSTONE CORN SHELLERS

ALL SIZES. KEYSTONE MFG. CO.



ATKINS' SILVER STEEL DIAMOND, THE KING OF SAWS

Made from our celebrated Silver Steel, tempered by our patented methods. It is the fastest cutting, easiest running saw made. It will cut out any other saw in use. IN HARD WOOD and FROZEN TIMBER it will do satisfactory work where other saws fail. This has been demonstrated by actual tests in all kinds of woods, with the most improved saws. It is the best "all the year around saw used." We CHALLENGE THE WORLD to produce a saw equaling the ATKINS' SILVER STEEL DIAMOND.

PRICE, INCLUDING HANDLES AND RAKER GAUGE, \$1.00 PER FT. For sale by the trade. Ask your hardware dealer for the Atkins Silver Steel Diamond and take no other. If the dealer will not order it for you, remit amount with order direct to us.

E. C. ATKINS & CO.
Indianapolis, Ind. Memphis, Tenn.
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SORGHUM EVAPORATOR

For MAPLE, SORGHUM, CIDER, and Fruit Jellies. Has a corrugated cover over firebox, doubling boiling capacity; small interchangeable syrup pans (connected by siphons), easily handled for cleaning and storing; and a perfect automatic regulator. The Champion is as great an improvement over the Cook pan as the latter was over the old iron kettle hung on a fence rail. Catalogues Free. Mention this paper.

THE G. H. GRIMM MFG. CO. HUDSON, O.



Dinner Set, No. 130. 118 Pieces.

English Porcelain Stone China

Premium with an order of \$20. Or packed and delivered at depot for \$8.00 Cash. We have hundreds of other Sets, plain and decorated.

THE LONDON TEA CO., 795 Washington Street, Boston.



Enterprise Meat Chopper.

BEST IN THE WORLD.

GUARANTEED TO CHOP, NOT GRIND THE MEAT.

ENTERPRISE HAND SIZES.

No. 5, Chops 1 lb. per minute, \$2.00.
No. 10, Chops 2 lbs. per minute, \$3.00.
No. 12, (Screws to table), chops 2 lbs. per minute \$2.50.

FOR SALE by the Hardware Trade

UNEXCELLED FOR CHOPPING

SAUSAGE MEAT, MINCE MEAT, HAMBURG STEAK for DYSPEPTICS, HASH, HOG'S-HEAD CHEESE, TRIPE, CLAMS, SUET, CHICKEN SALAD, CHICKEN CROQUETTES, CODFISH, SCRAP MEAT for POULTRY, PEPPERS, SCRAPPLE, CORN FOR FRITTERS, COCOANUT, &c. ALSO FOR MAKING BEEF TEA FOR INVALIDS, MASHING POTATOES, PULVERIZING CRACKERS, &c., &c.

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For Corn and Cobs, Feed and Table Meal. Grinds finer, runs lighter, is more durable than any mill on the market. Send for Catalogue before buying. A. W. STRAUB & CO., Philada., Pa. | SPRINGFIELD IMPLEMENT CO., Springfield, Ohio Territory East of Ohio.



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3 TON \$35. Sent on trial. Freight paid. Other sizes proportionately low. Fully Warranted. OSGOOD & THOMPSON, Binghamton, N. Y. Mention this paper.



SEDGWICK STEEL WIRE FENCE

Best Fences and Gates for all purposes. Free Catalogue giving full particulars and prices. Ask Hardware Dealers, or address, mentioning this paper, SEDGWICK BROS., Richmond, Ind.



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GRINDS ALL KINDS OF GRAIN including EAR CORN and FURNISHES POWER to run a Feed Cutter, Wood Saw, &c. at the same time. Catalogue showing a full line of Sweep and Belt Power Feed Mills, Corn Shellers, Feed Cutters, Horse Powers, &c., free by mentioning this paper. STOVER MFG. CO., FREEPORT, ILL.

DOUBLE Breech-Loader \$6.75.

RIFLES \$2.00
PISTOLS 75c

ALL kinds cheaper than elsewhere. Before you buy, send stamp for Catalogue. Address POWELL & CLEMENT, 180 Main Street, Cincinnati, Ohio.

WE are IMPORTERS of Tea and Coffee, China and Crockery, and do the largest Tea and Coffee business in Boston (direct with consumers). We also carry a large stock and sell at the lowest possible Cash prices Dinner and Tea Sets, Silver-plated Ware, Lamps, etc. To those who take the time and trouble to get up Clubs for Tea, Coffee, Spices and Extracts, we offer premiums. In buying Tea and Coffee from us you get full value for the money invested and get a premium, and you get goods that are direct from the IMPORTERS. If you buy Tea and Coffee from your grocery you pay three or four profits and pay for a premium but do not get it. In an article published in one of the largest dailies in this country it was claimed the tea bought from the retail grocer showed a profit of 100 per cent. The moral is plain, buy from first hands.

We have been doing business in Boston for 15 years, and the publishers of this paper will tell you of our undoubted reliability. We do a business of nearly \$300,000 yearly, and we expect our Cash sales of Dinner, Tea and Toilet Sets, Silver Ware, Lamps, etc., will amount to \$40,000 this year aside from our Tea and Coffee sales. (Rogers' Knives \$3.50 per dozen.) Our illustrated Price and Premium list tells the whole story. We like to mail it to all who write for it; it costs you nothing and will interest you. 120 pages.

THE LONDON TEA CO., 795 Washington Street, Boston.



RUST'S WELL DRILLING MACHINERY,

Steam and Horse Power, for Deep and Shallow Wells. Over 20 Years Experience.

Reliable Tools Guaranteed by a Responsible Firm. Will OUTDRILL AND OUTLAST any other Machine.

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Mention this paper when you write.



MAST, FOOS & CO.

SPRINGFIELD, OHIO. MANUFACTURERS

IRON TURBINE OF THE

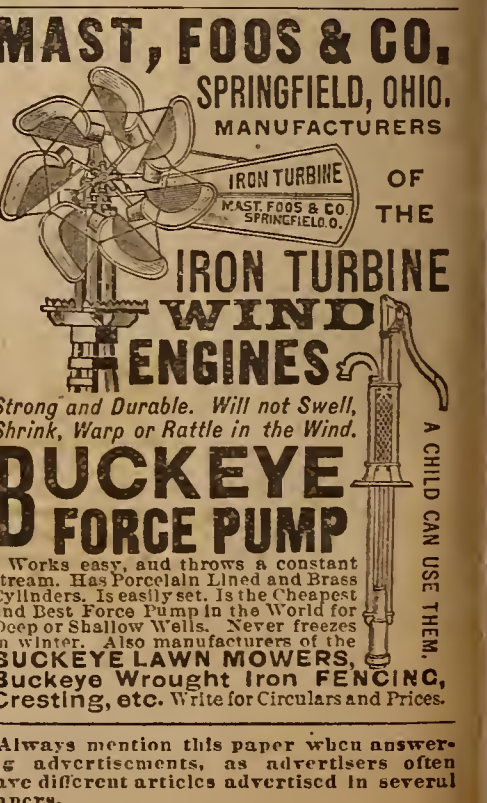
IRON TURBINE WIND ENGINES

Strong and Durable. Will not Swell, Shrink, Warp or Rattle in the Wind.

BUCKEYE FORCE PUMP

Works easy, and throws a constant stream. Has Porcelain Lined and Brass Cylinders. Is easily set. Is the Cheapest and Best Force Pump in the World for Deep or Shallow Wells. Never freezes in winter. Also manufacturers of the BUCKEYE LAWN MOWERS, Buckeye Wrought Iron FENCING, Cresting, etc. Write for Circulars and Prices.

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.



IRON TURBINE WIND ENGINES

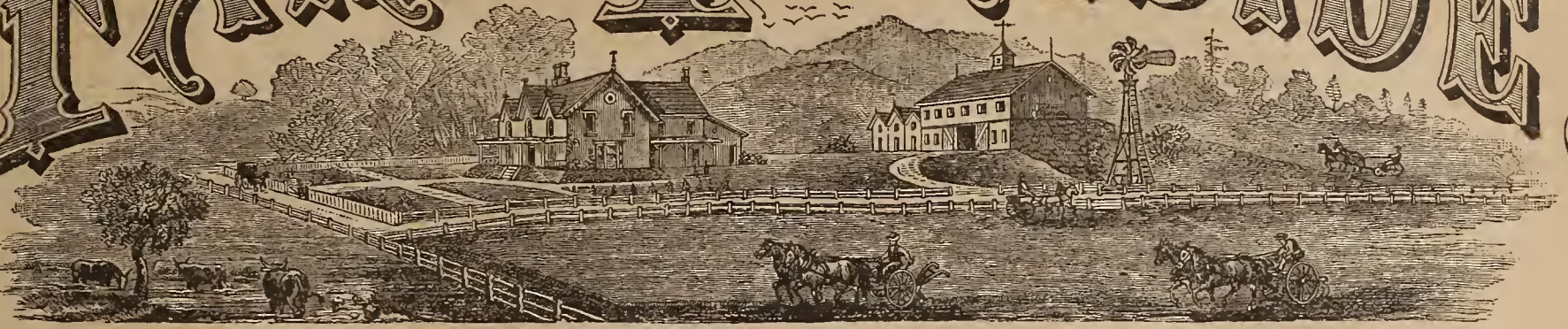
Strong and Durable. Will not Swell, Shrink, Warp or Rattle in the Wind.

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FARM & FIRESIDE.



EASTERN EDITION.

VOL. XIII. NO. 2.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, OCTOBER 15, 1889.

TERMS {50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

250,400 COPIES.

The Average Circulation this year, or for the
20 issues since January 1, 1889, has been

238,650 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,100 copies, the Western edition
being 150,300 copies this issue.

Current Comment.

THE Cornell (New York) experiment station has been making a study of windbreaks in their relations to fruit growing. Inquiries were made of the leading fruit growers of New York and Michigan, and the replies received are given in a recent bulletin of the station.

The most of the testimony is in favor of windbreaks for fruit plantations, but there is a decided difference of opinion among fruit growers as to their value. The bulletin gives the following general summary as the result of the investigation:

1. A windbreak may exert great influence upon a fruit plantation.

2. The benefits derived from windbreaks are the following: Protection from cold; lessening of evaporation from the soil and plants; lessening of windfalls; lessening of liability to mechanical injury of trees; retention of snow and leaves; facilitating of labor; protection of blossoms from severe winds; enabling trees to grow more erect; lessening of injury from the drying up of small fruits; retention of sand in certain localities; encouragement of birds; ornamentation.

3. The injuries sustained from windbreaks are as follows: Preventing the free circulation of warm winds and consequent exposure to cold; injuries from the insects and fungus diseases; injuries from the encroachment of the windbreak itself; increased liability to late spring frosts in rare cases.

a. The injury from cold, still air is usually confined to those locations which are directly influenced by large bodies of water and which are protected by forest belts. It can be avoided by planting thin belts.

b. The injury from insects can be averted by spraying with arsenical poisons.

c. The injury from the encroachment of the windbreak may be averted, in part, at least, by good cultivation and by planting the fruit simultaneously with the belt.

4. Windbreaks are advantageous wherever fruit plantations are exposed to strong winds.

5. In interior places, dense or broad belts, of two or more rows of trees, are desirable, while within the influence of large bodies of water, thin or narrow belts, comprising but a row or two, are usually preferable.

6. The best trees for windbreaks in the north-eastern states are Norway spruce, and Austrian and Scotch pines, among the evergreens. Among the deciduous trees, most of the rapidly-growing, native species are useful. A mixed plantation, with the hardiest and most vigorous deciduous trees on the windward, is probably the ideal shelter belt.

WITHIN a quarter of a century the growth of planted groves and orchards of fruit and forest trees has completely changed the general appearance of the Grand prairie of Illinois. The change has been so gradual that the inhabitants hardly realize the contrast between the present and past condition of their country. To the occasional traveler, the contrast is very marked and the

improvement very great. In what has taken place there can be seen the promise of the time when all the great, treeless prairies of the West will be dotted over with beautiful forest groves. Many thousand acres of forest trees are now annually planted there.

Hastened by necessity and encouraged by legislation, the work is going on at an accelerating rate. Doubtless, in a half century the appearance and condition of the whole western country will be greatly changed for the better by timber culture.

The planting of forest trees in some portions of the West is done on no insignificant scale. A single nursery in Nebraska reports selling over twenty-five million young forest trees in one year. This number, planted a little over four feet apart each way, or at the rate of twenty-five hundred per acre, will cover ten thousand acres, a good showing for the annual product of one nursery.

It is quite different in the East. Aside from the planting of shade and ornamental trees, and a few groves for windbreaks or fence-post timber, little has been done. On the other hand, the forest area has been rapidly diminishing. One third of a century ago the natural forests covered more than one half the area of Ohio; now they cover little more than one fifth. Possibly, that is enough timber for the state if it were properly distributed and located. But it is not. So much of the original forest on hillsides has been cleared off that should never have been destroyed.

More fertility has been removed from the sloping lands by the washing of the rains than by the crops grown on them, and they have rapidly decreased in value. The best way to restore and retain fertility on lands liable to wash is to replant them to forest trees.

When the people of the East get down to practical forestry in dead earnest, as they will some day, the place for them to begin is on the hillsides from which the original forests should never have been removed. With underdrained lowlands and forest-crowned hills, the condition of our country would be vastly improved.

A good way to manage the hillside lands that are liable to wash is to keep them in grass as much as possible. An occasional crop of wheat, or other small grain, may be grown, and the land seeded immediately back to grass, but cultivated crops, such as corn, should not be grown on sloping, washy land. The summer cultivation puts the soil in shape to receive the greatest possible damage from rainfall. The forests should be restored to these lands, but it may be impossible to do this at once, and the next best thing should be done. Adopt for them a rotation of crops that will omit the cultivated ones and keep them in grass as much as possible.

These hillsides will not produce nearly the same quantity of grass as the lowlands, but the quality is usually much better. They are the ideal sheep pastures. And here again, to make the most out of a farm of rolling land, the stock, as well as the crops raised, must be what is best adapted to the land. There have been

times in the history of our country when the hilly sheep farms paid larger profits than the richer, level lands devoted to grain raising. This may, or may not, happen again, but in any event they are sure, in the long run, to pay better with grass and sheep than with grain.

ONE great trouble the people have about the new inventions and great discoveries of the age is to readily obtain the use of them at anything like a comparatively moderate cost. Combinations of men and capital control telegraphs, telephones, electric lights, electric railways, natural gas, etc., and furnish them to the people at just enough less the cost of the things they supersede to induce the public to use them. It is true, the public pays less for electric light than for illuminating gas, and natural gas is cheaper than coal, and the people are so much better off, but they do not begin to get them at the price they ought to. In other words, the people are prevented from realizing the full benefits of inventions and discoveries as long as it is possible for capitalists to help it. Competition will reduce the cost to the public in time, if it is not strangled by combination. These things could be furnished to the public at much less cost and still pay a reasonable interest on the capital invested.

THE great interest which the discussion of the topic, "Exaggeration of cuts and descriptions in catalogues," aroused at the recent florists' convention, and the readiness with which compulsory and rather radical means of suppressing this evil were adopted by the society, was a most significant and hopeful sign.

It showed that people have had enough of this exaggeration, and that the demand for its abolition is almost universal and by far too strong to be long resisted. Some of the catalogue makers tried to stem the tide, but in vain. Let an evil be once generally recognized and its end is not far. The time is not far when catalogue makers generally will follow in the footsteps of Landreth & Sons, who, last season, only gave reproductions of photographic views of the different vegetables. At any rate, the exaggeration of cuts and extravagance of language must necessarily cease. Catalogue makers have gone about as far as they can possibly go. The painter's colors and the vocabulary of the English language have been drawn on until there is nothing left with which they can go further. It will be a good thing to see simple, truthful statements and natural illustrations and colors in common use.

SOME of the experiment stations are doing a very good work somewhat in the same line. While making comparative tests of varieties of grains, vegetables and fruits, both new and old, they are making a study of synonyms. For instance, several popular varieties of wheat, such as Michigan Amber and Red Fultz, are now before the public under a half dozen or more different names each. And year after year the same potato appears under a new name as a new variety. Now, an Early Rose by any other name is just as good, but no better. And the

seedsman, or dealer, rather, who sends out an old variety under a new name at fancy prices is deliberately swindling his customers. Seedsman who have a reputation to make or sustain do not do this. Sometimes the same variety acquires several different names without any deliberate fraud being intended. Reputable seedsman guard carefully against making such mistakes. But there are many unscrupulous dealers ready to take advantage of the demand for new varieties and palm off the old for new and improved. Purchasers are swindled out of thousands of dollars annually in this way.

By a determination of synonyms, the stations can save many thousand dollars annually to the public. They will endeavor to get all seedsman to adopt one name where there are now several for the same variety. Even if they fail in this, their work will be a success, for the public will be informed as to the identity of so-called different varieties, and will not be easily imposed upon.

The work will be a positive benefit to all honorable seedsman. For the purchaser who has been imposed upon becomes a shy customer. Only the ones who receive satisfaction become steady and reliable customers. Therefore, reputable seedsman are interested in putting a check on the operations of swindling competitors.

AT Washington, on the second of this month, occurred the organization of the International Congress of the three Americas.

Delegates from seventeen independent American governments met in friendly conference to deliberate on subjects of vast importance to the future welfare and prosperity of each and all of them. Secretary Blaine was unanimously chosen president of the congress, and Gen. T. B. Henderson, president pro tem. After speeches by the officers elected, the adoption of some resolutions, and the appointment of various committees, the congress adjourned till November 18. In the meantime, the members of the International American Congress will be the guests of this government in an extended excursion through the United States, to meet the people and study the commercial and industrial features of the country.

According to the pamphlet of information, issued by the State Department, the following will be the main topics discussed by the congress when it reassembles: First, measures that shall tend to preserve the peace and promote the prosperity of the several American states. Second, measures toward the formation of an American customs union, under which the trade of American nations with each other shall, so far as possible and profitable, be promoted. The third and fourth relate to transportation, the fifth, to the adoption of a uniform system of weights and measures, and the sixth, to the adoption of a common silver coin.

This congress of nations is one of the most notable events of the times. It meets, not to adjust difficulties of war, but, in a time of peace, to prepare for the conquests of commerce, and provide for perpetual peace in all America.

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ISSUED 1st AND 15th OF EACH MONTH BY

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Our Farm.

AGRICULTURAL CHEMISTRY

From the Standpoint of the Practical Farmer.

BY JOSEPH (TUISCO GREINER).

No. 19.



ARTIFICIAL STABLE MANURE.—

Perhaps I have before this spoken too lightly of the value of muck or peat as a fertilizer. It is true that in many cases, even where it can be had close by, and in unlimited quantities, the expense of getting it out and in shape for fertilizing purposes is so large that we have to pause and ask ourselves, "Will the returns pay us for all this trouble?" We also have to consider that there is a great difference in the value of different samples of peaty and mucky soils, some being much richer than others in nitrogen, some containing mineral elements of plant foods, while others do not, and some being well-nigh worthless. The kind I have now under consideration is an average sample of black muck, as generally found in bogs and swampy meadows, and which consists almost altogether of decayed vegetable matter, so saturated with water, sponge-like, that the liquid element forms more than three fourths of its weight.

Suppose we have a soil which needs the mechanical effect that stable manure gives, about as much as it does the plant food which the latter contains; in other words, soil in such condition as to require the addition of some bulky, porous substance to open it up; to render it pulverizable, to furnish the decaying matter which serves as a medium through and in which the process of nitrification is carried on, and to add to its capacity for absorbing and holding moisture, etc. In this case, a fair average quality of muck, properly prepared, may give us every advantage of stable manure at a reasonable cost of materials and preparation.

The chief ingredient of plant food which muck or peat contains is nitrogen, and of this an average sample of wet muck has a little more than one third per cent, or about seven pounds per ton. By exposing the muck for some time to the air, and giving about half of the water a chance to evaporate, we can get it reasonably dry, so that a ton of it would contain twelve pounds of nitrogen. If this were readily

available, it would make the ton of this partially dried muck worth about \$2. Perfectly dry muck has so much nitrogen that I have seen its value estimated by some of the stations at \$9 per ton, which, however, is by far too high, compared with its agricultural value.

The nitrogen in muck is not readily available, but we will have little difficulty in making it so by a little manipulation. I think I have already mentioned one way on a former occasion. This is by making use of the dry or partially dry muck as bedding for stock—horses, cows, pigs, etc.—and as absorbent in poultry-houses, closets, etc. Here it will soak up the liquids and become mixed with the solids. All that is of value in voidings will be held and saved from waste or deterioration. After having served its purpose in the stables, the muck is thrown together in a square heap to ferment, and is occasionally shoveled over. Thus its own original stores of nitrogen are changed by chemical action and gradually rendered available, so that the manure thus obtained is far more valuable than the straw stuff so often misnamed "stable manure." In a comparatively short time it will be in best possible condition for immediate application, unsurpassed as a top-dressing, especially for garden crops.

We may, however, not keep much, or any, stock that will help us to convert raw muck into a first quality of manure, and in such cases will be forced to resort to other means. For instance, we take a ton of muck having 12 pounds of nitrogen, add to it 200 pounds of unleached wood ashes, having 11 pounds of potash and 3½ pounds of phosphoric acid, and finally 15 pounds of dissolved bone, having 2½ pounds of phosphoric acid. Now we have

	Nitro- gen.	Potash	Phos. acid
2,000 lbs muck.....	10 lbs.	trace.	trace.
200 lbs wood ashes.....	11 lbs.	3½ lbs.
15 lbs dis'l'd bone.....	2½ lbs.
Total, 2,215 lbs, con- taining.....	10 lbs.	11 lbs.	6 lbs.

This material is now thoroughly composted, in a similar way as in the former case. No nitrogen is added, as was done by the addition of animal voidings, but the chemical action also helps to render the original nitrogen of the muck gradually available. In the course of manipulation, we probably deprive the muck of some of its moisture, and in the end we will have about one ton of compost. This contains:

12 lbs. nitrogen, value about	\$2 00
6 lbs. phosphoric acid, value about	40
11 lbs. potash,	60
Total worth.....	\$3 00

In other words, we have a ton of material the equal in every way to a ton of an unusually fine quality of stable manure, worth not less than from \$3 to \$3.50, and we have this at the following cost:

200 lbs. wood ashes (\$13.50 per ton).....	\$1 35
15 lbs. bone (\$32 per ton).....	25
Total.....	1 60

plus the labor required in getting out the muck and composting the mixture.

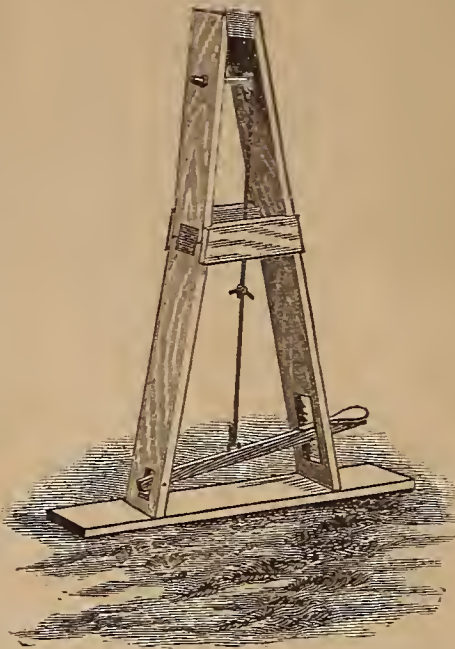
My object in the foregoing has been to show that we often have a way of getting the equivalent of good stable manure when the real article is not on hand, and cannot be purchased. Now, suppose that wood ashes were not to be had, either; then we would have to use some form of potash salts—for instance, kainit, of which 80 pounds would give us just about the quantity required, at a cost of about 60 cents. Since kainit has no phosphoric acid, however, we also would have to increase the allowance of dissolved bone, making it 25 pounds instead of 15 pounds. The materials would then cost us:

80 pounds kainit.....	60
25 pounds bone.....	40
Total.....	\$1 00

It is, of course, not necessary to adhere strictly to these proportions. They may be more or less varied or other plant foods substituted. Instead of bone, for instance, we might use any of the plain phosphates, or dead animals, etc. Or we may simply mix a quantity of the common fertilizers, containing phosphoric acid, potash and perhaps a little nitrogen, with the muck, and thus compost it. I have demonstrated the principles, and every one can modify the details according to the particular circumstances of the particular case.

A CONVENIENT HARNESS-HOLDER.

I send you herewith a rough sketch of a harness-holder which I have made, and which I like very much. I made it of 1 by 4 pine fencing. It is 2 feet 6 inches high; the bottom cross piece is 18 inches long, and the outer ends are left so as to set one's feet on to hold it steady. By having the hinge joint come about the middle of the end of these pieces, a leather hinge is sufficient, as the strain will come



on the cross pieces. The treadle is of hard wood, and has a piece of wagon-bed iron on top of it where it catches in the ratchet. The ratchet is also made by filing notches in a piece of wagon-bed iron. The piece of ¾-inch rope which runs over the small pulley might run clear to the treadle, but I prefer to have a small rod part way, as it does not stretch like the rope would.

Logan county, Neb. A. L. PIERCE.

THE PEACH IN CALIFORNIA.

"The peach is the leading orchard fruit of California." is the first sentence on the peach in Prof. Wickson's "The Fruits of California and How to Grow Them," from which I have drawn some of the following facts: It was the first fruit of the improved kinds that was ripened by the pioneers. "In old Coloma, where gold was first discovered, there was one of these first-planted peach trees which bore four hundred and fifty peaches in 1854, which sold for \$3 each, or \$1,350 for the crop of one tree. And in 1855 six trees bore eleven hundred, which sold for \$1 each. These pioneer trees are said to be still living and bearing fruit. Such was the boom with which the peach started in with in California climate and soil, so perfectly suited to its growth. And for many years he that planted and cared for the peach reaped more surely the golden harvest than he that delved into the earth for the yellow dust." At the San Jose horticultural society in 1886, G. W. Tarlton showed peaches from a thirty-year-old tree, as good as any on exhibition, and Jacob Graves, of the same place, the same year reported a crop of fifteen boxes, about 400 pounds, from a tree of the same age. These facts prove that the peach is a very healthy, long-lived tree in this state. And when we consider the other fact that it fruits nearly every year, we see that as a fruit tree of great value it is phenomenal.

The tree not only lives and fruits for more than a generation, but its head gives out before its roots, and often in its old age it throws up a vigorous sucker from the ground, sheds off its old head, and renews its life for another generation.

To one opening a new place here, the peach, of all tree fruits, gives the first fruits. As a rule, it fruits freely the second year from the bud, and after the second season from the seed. F. M. Tenny, of San Jose, has 550 peach trees, which, in 1886, two and one half years from time of planting in the orchard, matured eleven tons, which sold at \$50 and \$55 per ton, and vegetables had been grown between the trees. One tree which was measured was fourteen feet high, twelve and one half feet in diameter of spread of branches and ten inches in circumference of trunk. Here we have a gross return per acre of over \$100, in two and one half years from the planting of the trees. This

has often been exceeded from three-year-old peach trees in this state.

The best peach climate of California is that which has sufficient summer heat, and is far enough from the coast, or sheltered by high mountains, to be out of the influence of the cool, summer coast winds and fogs. Therefore, the whole vast interior is a well-nigh perfect peach and nectarine climate up to an elevation of about three thousand feet. In this whole vast interior all we need to look for to grow peaches is the right soil in the north half of the central region, and soil, and water for irrigation, in the south half. In this great central region, stretching for seven hundred miles, from San Diego in the south to Shasta in the north, in the great valleys and on the foothills, and in the thousand lateral valleys, the peach is king of fruits and the nectarine the beautiful queen.

The soil best adapted to these fruits is a rich, warm, deep, sandy loam, well drained. A good soil for the peach may approach very nearly to a pure sand, if fine and deep. On the other soils, success is had by budding the peach on the St. Julian plum, for moist, rich and clayey soils, and on the "peach almond" for very dry, gravelly, chalky or stony soils.

The peach tree and its fruit is everywhere here healthier and fairer and finer flavored on ground somewhat elevated above its surroundings, or in other words, the tree and fruit are not so perfect and healthy in the lowest portions of low valleys as they are on higher ground, yet the fruit in such localities is very large and handsome. The grand slopes on each side of the great interior valleys is a natural home for fine peaches, yet the higher portions of the floors of these same valleys are very nearly perfect for this fruit. The portions of the great Sacramento and San Joaquin valleys that will not grow grand crops of magnificent peaches, under right culture, is small, indeed. And there on the floor of those great valleys, and on the adjacent foothills, is where the great, tender, juicy, meaty, rich fruit can be dried in the fierce heat of a cloudless sun perfectly for the world's market—no rain, no dews, no fog, no clouds to interfere with perfect desiccation. The great future product of California will undoubtedly be perfect sun-dried fruits, largely peaches and nectarines.

The only serious disease so far is the curl of the leaf of the peach. This disease is confined to the coast regions, and the lowest and dampest portions of the interior valleys. This curl causes the leaves to fall; also the fruit when the tree is badly affected.

The peach, of all the fruits of California, seems to me the one that will the most certainly give a sure profit to the grower. It seems hardly possible that there can be overproduction of the peach and nectarine—for everything here said of the peach is intended to carry the nectarine along with it—in different forms of fresh, dried and canned fruits.

D. B. WIER.

HORTICULTURAL WORK IN SOCIETIES—
PLANTING BULBS.

"I do think Mr. X. might have told us where, what and how to plant bulbs when he was advising us to purchase some. Most of us know that many bulbs have to be planted in the fall, but there is much information beyond this that many lack, and I think we ought to look for it in our horticultural meetings, and get a part of it, at least, from the committee intrusted with that department."

Such was the comment of a lady, after listening to the half-minute report of a committee on ornamental planting, that it was about time to be ordering bulbs. It seemed to me that the lady and the society had a right to expect something more at the hands of its committee, and the opportunity was one that the committee should have been proud to improve. An audience of one hundred intelligent ladies and gentlemen, the vanguard of horticulture, especially met to learn and compare notes, would appreciate a carefully-prepared paper, even if it was twenty minutes long, and would gladly welcome a shorter one. If the committee is too busy to do such work, it should

tender a resignation, as it is always supposed that the question of ability is taken for granted in making the appointment. At the same meeting the committee on small fruits had not a word to say, yet I doubt not he could, if so disposed, have found abundance of material beyond the reach of a majority of his fellow members.

How would it do for members of special and standing committees of horticultural societies to take some journals especially devoted to their specialty, and add to their library books in the same line, and in this way make certain of being able to lead their societies in branches assigned to them? I once heard the able ornithological committeeman of a leading state horticultural society say: "When I was appointed I had little interest and still less knowledge of my subject. But the appointment has led me to study it, until I am greatly interested and materially benefited." The late President Tryon, of Ohio, when asked why he urged a certain appointment, replied: "In the absence of one specially educated in that line, it became necessary to appoint some one who would study it up, and I thought the person appointed would be the most likely to do it."

In a flourishing local horticultural society I know a young man who has allowed his name to appear on the card for nearly two years as constituting an important committee, and has not made a single report. He is throwing away a rare opportunity and injuring himself at the same time that he is depriving the society of its principal means of improvement in that direction.

All this is suggested by the lady's disappointment in not learning from a likely source about planting bulbs. The question of how to plant, and description of varieties, can be obtained from bulb catalogues, and that is the best place to go for it. Where to put them is not generally treated in such publications.

It is not necessary to have a bed separate from that in use for geraniums, verbenas or annuals, at least for the spring-flowering bulbs. They form a valuable complement or preface to the summer bedders, and diminish by so much the period of bare and unsightly ground devoted to their use. When the frost has destroyed the beauty of the bedders, then the bed should be heavily manured with rotten manure and thoroughly forked in, when such bulbs as crocuses, hyacinths, tulips, daffodils and snowdrops may be planted.

The crocuses and snowdrops should have a location where they can be seen from the window, piazza or sheltered walk, as they bloom while the weather is yet inclement and almost everything else is wrapped in winter slumbers.

Little beds close to the house or walk may be made gay and beautiful in early spring, at a little expense, by planting to crocuses. The hyacinths and jonquils (daffodils) may be planted in the back part of the same bed. Tulips, with their showy, bright colors and taller stems, can be planted in the larger beds of the lawn, or in groups in the edge of shrubbery. These spring bulbs bloom and are soon gone, when the bed can be loosened and the little seedling verbenas, asters or phlox planted for summer bloom.

Summit county, Ohio. L. B. PIERCE.

TREE CULTURE IN THE WEST.

We have a large scope of country, perhaps as large as Russia, nearly void of natural timber. The question to be settled is, "Can this vast territory afford to pay tribute in the form of freight on fuel and timber for all future time?" There are many living among us who answer in the affirmative. They claim that it is cheaper to buy fuel and timber than to raise it; that this is not a natural timber country, and that time is wasted in tending trees. They point to the hundreds of failures in groves on tree claims as evidence. And it is a fact that one may travel a whole day through certain belts of country and scarcely see a decent grove of trees.

But I claim this is a false guide-board, for you can travel through other regions and see nearly all nice groves. Where the wild rye infests the country, the trees cannot thrive without an immense amount of work. This grass will grow

unless every foot of ground is turned over once a year, and it will kill out trees fifteen or twenty feet high. Again, none of the cottonwood family will thrive where the trees are thick together. There are three kinds of bugs that infest them; but if planted in single rows, or far apart, they thrive in spite of the bugs.

Now, a good many fellow pioneers tell me they have not time to cultivate trees; that they have to put all their energies together to make a living and improve their claims. Now, I will tell you how I manage to cultivate trees and raise large crops, too: After I sow my oats I plow and harrow the ground on which to plant the trees; fall plowing is not best, because the weeds come up too quick. I mark it out both ways with a four-foot marker. I plant seedlings or walnuts in every other row, and every other hill in the row, so that the trees will be eight feet apart each way. I would not have them closer together, except in tree claims, as the law there requires it. I plant the remaining crosses to corn, with a hand corn planter. The trees would make a heavier growth if the piece was only half in corn and balance in beans, potatoes, etc. I leave the corn stalks stand over winter to protect the trees, as young trees sometimes winter-kill.

ADVANTAGES:—The trees get cultivated at the time they need it. Many leave their trees till they get their corn laid by, and then cultivate them, just when they should not. The trees do the bulk of their growing at the time the corn is small and does not interfere much. The corn being further apart, yields heavier. The following year I plow between the trees and plant corn as before, replanting all missing trees. Besides my small grain, I am tending fifty-five acres of corn and trees, twenty acres of it being in trees, as above mentioned. I now have trees two years old as high as the highest corn. The first year I sometimes find it necessary to pull out the weeds close around the trees; otherwise, they receive only the treatment that the corn gets.

I would call the attention of my Nebraska readers to the fifty-dollar bounty offered in our statutes for the cultivation of three acres of timber. A. A. SNOW. Custer county, Neb.

PERHAPS YOU KNOW ALL THIS NOW.

Butter is cheap now, but don't say that dairying doesn't pay until you see how the price ranges during the fall and coming winter. If your cows all calved last spring, you are badly prepared for winter dairying, for when the price of butter is the highest, the yield is at the lowest. Be wise, and breed most of your cows to "come in" in the fall and early winter, with a few only to calve in the spring.

Milk your cows well up to the time of calving; two or three weeks is long enough for a cow to "rest." Keep your cows at work, and if you treat them right they will work the year around, just as your horses do. A cow is better off giving milk on a full ration than resting on a half one.

The heifer calf will grow up to be a cow, and if it proves to be one of the kicking kind, it is the owner's fault. I was reading the other day about how a man "broke" his heifers by tying their legs together. He probably broke some of the ten commandments at the same time. I have never had to break a heifer of my own raising; they are trained while still calves, and as they are used to having their teats pulled when there is no milk in their udders, they don't resist it when there is. See the point? Well, then, don't swear the next time a young cow kicks you over when you pull her teats for the first time in her life; it is your fault, not the cow's.

The milk-bucket is a pretty good indication of the character of the cows and their owner. If it looks as if it had been used as a target to throw stones at, and the stone throwers were pretty good marksmen, then you can depend upon it the language used in that cow-stable is unfit for publication. It is easy to raise cows that are gentle; it is still easier to undo the work of years by a few weeks of rough treatment. If the earned dairy dollars delight you, then remember that the cow with the good, gentle, affectionate disposi-

tion is the one that gives the most dollars in the fewest days.

"Like master like man," and like owner like cow, is just as true. If you are quick-tempered and easily provoked, and allow your cows to receive the full benefit of your example, they will be pretty sure to follow it. The result will be more "life" in the cow-stable at milking time, and less butter in the churn at churning time. I like to see a herd of cows so gentle that when the owner goes through it in the field he has to wind his way in and out among the cows because they will not step aside. If, on the contrary, he has to coax the cows so as to get near enough to put his hand on them, there is a good deal wrong in the care of them. Winter will soon be here, and that is the time to strike up a friendship with your cows and calves that will inure to the benefit of both owner and owned.

A. L. CROSBY.

FARM WELLS.

The wells on the farm are a great source from which come many diseases. Some wells are never cleaned. When dug they are carefully boarded over, the pump made tight and snug, with the ground sloping away on all sides so as to allow the surface water to flow from the opening. There is no well water that is pure. Something depends on the character of the soil. If sandy, and the water will disappear quickly from the surface after a rain, the well will drain the soil for a long distance around it, and the consequence will be that a large portion of the filth of the soil will find its way into the well, although the water may appear sparkling and bright. It is contended that the soil removes all the impurities from the water; but this depends upon whether the soil, by long-continued absorption, be not already so thoroughly saturated with impurities as to refuse to take up more. That the soil does not remove all the impurities, even from new ground where a well has been recently dug, has been demonstrated by saturating the surface earth at a distance from the well with kerosene oil, which gradually found its way to the well (having been washed down by the rains) and imparted its odor to the water.

If the soil be of heavy clay the danger will be lessened, but on all porous soil the liability of pollution of the water is great. No manure heaps, privies, sinks or other receptacle for filth or refuse of any kind, should be within one hundred and fifty feet of the well—the further off the better. No matter how tight the well may be, the toad will sometimes contrive to get in. Many wells contain toads that die and are swallowed in the drinking water unknowingly, under the supposition that the well is tight and "toad proof." Wells should be cleaned at least once a year, and especially in the fall. For a distance of ten feet around the well the surface should be cemented, and the pump itself should be cleaned occasionally. Toads, flies, bugs, worms and even gnats will get in the water, while even a few drops of a solution from a filthy drain or sink, finding its way into the well, carry bacteria enough rapidly to multiply and contaminate all of the water. Roots of trees and vines also serve as drains into the wells, as they loosen the soil, and for that reason they should never be planted near the source of drinking water.—*Sanitary News.*

AGRICULTURE A SUCCESS.

It is claimed that farming does not pay like other occupations. I believe that it does pay. It is more profitable than any other industry to a larger number of people or in a larger number of cases than other forms of business. Because people hear of an occasional instance of prosperity among machinists, mechanics or manufacturers, it is assumed that nearly all succeed, but this is not so. The 95 or 97 per cent of unsuccessful men are never referred to, while the small numbers who succeed are lauded to the skies. This is about the proportion in nearly every trade and profession of success or failure. A larger, better showing is made among men who follow agriculture. The intensity of competition among manufacturers requires them to hire cheap labor. The one hope of those so forced to the wall is to go onto farms or become so skilled in

some line that their labor is indispensable. It is not necessary that one should go West to begin farming with the hope of success. Labor, frugality, skill, effort, are just as sure of reward in New England as in the newer states, and the same qualifications are much more likely to give success in farming than in any other profession or employment. There are just as many opportunities to do well now as were ever known. Nor do farmers spend more hours at their labors than men in other occupations. The drudgery of the farmer is no more severe than that experienced by the tradesman, merchant or professional man.—*Rev. E. C. Baldwin, in Farm and Home.*

WEEDS, WHERE DO THEY COME FROM?

The ordinary weeds are, however, plants for which we have no use. Where do they come from? All plants come from seeds or buds of some form. When, then, weeds spring up in the garden, they come from seeds which in some manner have gotten there. What are these means? A few of the more common only can be named:

1. The seeds of weeds are often present among the seeds which are sown. Farmers must be on their guard constantly when they purchase grass seed, or else they may sow their farms with noxious weeds.
2. Many weeds are introduced into the garden with the manure used. Stable manure contains the seeds of all the weeds which existed in the hay and straw of which the manure was formed. The writer has seen different crops of weeds growing on his grounds, brought from different stables. Commercial fertilizers are free from weeds.
3. The wind blows many seeds into the garden. Some seeds, as those of the dandelion and thistle, are formed for this mode of dispersion.
4. The melting snow and running surface waters may introduce other weeds from our neighbor's grounds. Streams running through the garden may carry many seeds.
5. Other seeds are in the droppings of birds, and some are carried in the mud on their feet.
6. Railway trains carry weeds and distribute them about the country with great rapidity.
7. Some seeds cling to our domestic animals, and are thus introduced into our grounds.
8. Other seeds cling to the clothing of man and are carried from place to place. Whenever an army passes through a country, weeds unknown in the region before spring up. Thus in Georgia, after Sherman's invasion, and in France, after the invasion of the Germans, pestilential weeds are said to have appeared in abundance. The broad-leaved plantain is called by our Indians the "White Man's Footmarks," because it springs up on his camping ground.—*Vick's Magazine.*

FERTILITY VALUE OF BRAN.

Wheat bran is very rich in those elements which give it unusual value in bone making, and which render the manure made from it very valuable indeed as a fertilizer. On this point the sixth annual report of the New York Agricultural Experiment Station says:

"Two thirds of the nitrogen of the grain remains as a part of the flour, but of the mineral elements, phosphates, potash, etc., the larger proportion is left in the by-products, which are used as animal feeds, only about one fifth of the phosphates being in the bran.

"The high coefficient of digestibility for the by-products from flour production renders them a most valuable source of animal feed, and at the same time so concentrated and rich are they in those elements necessary to a fertile soil that they become, when properly managed, a valuable source of fertilizers. We find that the milling products from one bushel of wheat having a composition like our sample would contain the following amounts of fertilizer matter expressed in pounds:

	Nitrogen.	Acid Phos.	Potash.	Lime.
Flour.....	.739	.092	.054	.013
Middlings.....	.105	.064	.024	.002
Shipstuff.....	.056	.044	.083	.003
Bran.....	.228	.251	.182	.012
Totals.....	1.128	.451	.343	.030

"The relatively high richness of bran in these valuable manurial elements will be apparent when we consider that the quantities given above are for forty-four pounds flour, four pounds middlings, two pounds shipstuff and ten pounds bran."

Our Farm.

POINTS IN POTATO GROWING.

BY JOSEPH.

PREPARING THE SOIL.—Old-country people have for ages understood the full importance of a thorough pulverization of the soil for the purpose of potato growing. They commence to plow in the fall, and continue to plow until the piece to be planted has been turned over three or four times. This, undoubtedly, is a pretty effectual method, yet not one which we would wish to adopt. The American farmer is satisfied if he can plow his land thoroughly a single time, or at most twice, once in the fall and again in the spring, and the "thorough pulverization" of the soil has to be accomplished by less laborious and less expensive means. I am not entirely satisfied that repeated plowing aids in increasing the yield on all soils. A comparative trial made last year between a strip of sandy loam plowed once and another adjoining plowed twice (both times in the spring), gave an entirely negative result. On the same soil its thorough pulverization in the bottom of the furrow failed to increase the crop in a perceptible degree. On many other soils, however, this "trench" method is of decided advantage, and perhaps equal in effectiveness to the repeated plowings of our European brethren. But while we have harrows that might be called models of perfection, so far as their effectiveness in pulverizing the surface to quite a depth is concerned, such harrows as the Acme, the Disk, Cutaway, etc., I have not yet seen the tool that gives me entire satisfaction for pulverizing the soil in the bottom of the trenches. A one-horse plow, or a shovel plow, might answer in an emergency, but I dislike to use a one-horse implement and have the horse walk in the furrow, where the soil should be kept mellow. Certainly, there cannot be anything to prevent the construction of a simple tool of this kind that would do good work. It might be arranged somewhat like a shovel plow, but instead of the "shovel blade," have four or five strong tines, the center ones being the longest, and the others gradually tapering off towards the outside. I would prefer to have it calculated for two horses. Manufacturers of agricultural implements should direct their attention to the construction of such a tool, and if arranged as could easily be done by making the tine part interchangeable with a set of hilling blades so it could be used for covering the seed, it would give us two implements which we are at present greatly in need of, in a single one.

POTATO ROT.—Owing to the excessively wet weather in many parts of the East, especially in New Jersey, New York and Pennsylvania, the potato fields are suffering from "rot," often in a terrible degree. This form of rot—and a most malignant disease it is—is caused by a parasitic fungus similar to that causing the downy mildew of the grape vine, which also has invaded many new districts this season, notably the heretofore exempt grape regions on the Hudson and in western New York. It is thought, and perhaps with good reason, that the same means of prevention used for the downy mildew will also prove efficacious in the case of the potato rot. This preventive treatment (the application of copper sulphate solution or mixture in spray form) involves, however, the possession of a spraying pump, early and prompt action, and often repeated applications, and just for these reasons, I think, it will be some years, if ever, before farmers will generally resort to it, especially since the dangers from this source in a dry season are not very serious.

What every farmer should adopt, however, are the following rules:

1. Never plant potatoes on a field where the rot has appeared the year before.
2. Select light, well-drained soil.
3. Use for seed only tubers that are free from every taint of the disease, or if suspicious, expose them for some time to a temperature of 110 degrees Fahrenheit just before planting, or soak them for 24 hours in a solution of sulphate of copper, four to six ounces of the sulphate in enough water to cover a bushel of potatoes.
4. Dig the

crop as soon as the tops begin to show signs of the disease, but in dry weather only. 5. Store in a dry and moderately cool room, and sprinkle with dry, air-slacked lime.

The early varieties hardly ever suffer from the disease, and in localities where this has become very destructive, it may be a wise move to plant only early sorts.

Prof. F. L. Scribner, who has given this subject much attention, thinks it is an error to suppose the rot to be "due to an enfeebled condition of the potato plant, especially from many years of cultivation." The disease, he says, "has never been more destructive than during the years 1843 to 1845, and the wild potato is no more free from the malady than the cultivated sorts." This in a certain sense is undoubtedly true. The attacks of potato-bugs are not due to an enfeebled condition of the plant, either; yet a thrifty plant often outlives and outgrows the injuries caused by potato-bugs, while a sickly plant speedily succumbs. I have an idea that the condition of our cultivated potatoes has a good deal to do with the extent and hold of the disease.

At the time mentioned by Prof. Scribner, the rot made almost a clean sweep of the varieties then existing here and in Europe, and it was feared that potato growing would soon have to be abandoned. Then Rev. C. Goodrich, Utica, New York, began his experiments in crossing our cultivated sorts with the wild potatoes introduced from Chili and Peru, resulting in the Garnet Chili, Early Goodrich, etc., varieties which most of us well remember, and which, for a while, proved to be rot-resisting. Our whole system of potato culture must invariably lead to an enfeebled condition of the varieties, and I think it is very important for us to make efforts to improve the vitality of the race either by a more frequent renewal through seedlings, or by a more natural system of propagation from "underground stems" than we have generally made use of in the past.

At the same time we need not despair. The rot is not new. It has come once before, and gone again. It is not likely that it will stay with us forever.

FIGHTING PLANT LICE.

At the florists' convention, held at Buffalo, N. Y., in August, Vice-President Palmer exhibited a little device by means of which he easily keeps his greenhouse free from aphides (plant lice) and red spiders. This consists in simple gutters an inch wide and deep, and eighteen inches long, put upon the pipes as "riders," and kept filled with strong tobacco tea. A strip of tin is soldered to the gutter near each of the four lower corners, and these strips are simply bent around the pipe, thus holding the gutter firmly, as shown in illustration. Mr. Palmer uses



one of these gutters to about each twenty feet of pipe in the house, and this seems to keep plant lice and red spiders at a respectful distance, although it shows no ill effects on the tenderest plant. It is possible that this device may be of use to gardeners who are operating vegetable forcing houses, and I mention it for their benefit.

At the same meeting a member stated that he disposed of the cutworm as well as of all other insects, and of live weed seeds also, in his potting soil, by heating the soil to near the boiling point. This is done in the easiest manner by laying a coil of steam-pipe connected with the boiler in the bottom of a large tank, and putting the soil upon this for a reasonable length of time, during which the steam is turned on.

JOSEPH.

A \$25.00 CRAYON PORTRAIT FREE.

In order to introduce our work we will make, free of charge, a life-size crayon portrait of yourself or any member of your family, providing you will agree to get the picture suitably framed, and use your influence in advertising our work. Send us a photograph by mail, and in two or three weeks from the time you send photo you will receive a beautiful, life-size crayon portrait. Address Western Art Association, 210 State St., Chicago.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Pecans in Louisiana.—E. H., Amite City, La. Yes, I think that pecans would grow in your parish, but they would probably do better if the land was more of a clay formation.

Book on Fruit Culture.—A. M., Titusville, Pa. Probably "Thomas' Fruit Culture" will be your best book, and you can obtain it of Orange Judd & Co., 751 Broadway, New York City.

Fig Culture.—We would like to hear from some of our readers who have had practical, successful experience in raising figs in California, Louisiana, Florida and elsewhere as to methods of culture, variety, profits, etc.

Scuppernon Vine.—Will some of our southern readers please answer the following: What should be done to the parent stem of an old Scuppernon which is split and full of dark brown, fibrous growth? It looks like dry rot.

Box Elder Seeds.—L. R., Gant, Mo. Box elder seeds ripen the latter part of the summer or the first of September. They may be stored in a cool, dry place and sown in the spring. A good way to store them is in a tight box buried in some dry rise of land.

English Walnuts, Etc.—S. L. W., Thomasville, Ala., writes: "I wish information about pecans, English walnuts, Spanish chestnuts and sweet almonds. Is it better to plant the nuts where the trees are wanted or transplant young trees from a nursery? Will butternuts do well in this climate?"

REPLY:—Should prefer to plant all the nuts in the nursery seed-bed; transplant to nursery rows when large enough, and then to the orchard. The nuts should be gathered in the fall and wintered over under a slight mulching of leaves. Sow in the spring in rows three feet apart, in rich, well drained soil. Butternuts will not do well in your state.

Varieties of Fruit for Northern Indiana.—B. P., Hinton, Ind., writes: "What kind of apples, plums, quinces, cherries and strawberries would you recommend for northern Indiana? Would it be better to get the trees from a nursery in Indiana or elsewhere? What aged trees are best to plant?"

REPLY:—I suggest the following list, which I know is good, but it may not be the best for your particular locality: Apples—Benoni and Duchess for summer; Maiden's Blush, Fameuse and Wealthy for autumn, and Jonathan, Ben Davis, Roman Stem and Willow Twig for winter use. Plums—Lombard, Quackenbos, Blue Gage, Coes' Golden Drop, and De Soto. The last is a native American plum, and a sure bearer, even if stung by curculio. Quinces—Orange, Rea's Mammoth. Cherries—Richmond, Black Tartarian and Gov. Wood. Strawberries—Crescent, fertilized with Wilson, is excellent for market purposes and reliable, but for a family berry I like something of better flavor, such as Miner's Prolific, May King, Sharpless or Belmont. There are many other good varieties. Should prefer to obtain trees from a local nursery if they are of good quality and true to name. I prefer to plant all but the strawberries in the fall, but plant as soon as the wood is matured, and firm the soil thoroughly around the roots and stake up. Two-year-old thrifty trees are best.

Salt for Currant Bushes.—H. H., Lacolle, Quebec, Canada, writes: "In your issue of June 1st your correspondent, Mrs. H. F. W., states that she applies refuse salt, etc., around the roots of her currant bushes, which prevent the ravages of the currant-worm. I would like to know how much salt is sufficient for each bush, and whether it requires to be scattered up close to the stem; also, whether sprinkling on the ground is sufficient. I have used salt and water and find it very effective when the worms appear on the leaves, putting about one fourth pound of salt to each gallon of water. A stronger solution will wither the leaves."

REPLY:—Dr. Suggs, the well-known entomologist, says that salt is not an effective remedy for the currant worm in any form. When put on them in the form of salt water it may paralyze them for a few moments, but it is not lasting in its effect. When applied around the roots as coarse salt, it cannot be effective. Many applications have been recommended as effective remedies, and salt is one of them. The mistake has been made by supposing the worms destroyed because they had left the plants, when, in reality, they had stopped feeding after having completed their growth and had hidden themselves to undergo their change. This has been heightened by the empty skins being thought to be the dried-up worms. White hellebore or pyrethrum powder are the best remedies.

Bone Meal for Young Trees.—E. R., Cunnelea, Knox county, Tenn. Bone meal is a very excellent fertilizer for a young orchard, but in almost every case it should be used in connection with some potash salt, and when used together they will give much better results than when one is used alone. For a nursery I should use as much as half a ton per acre of bone meal—you can hardly get on too much—and five hundred pounds of some low-grade potash salt, or else in its place a good dressing of unleached wood ashes. When the German potash salts are used they seem often to aid in producing very thrifty, healthy, well-ripened wood, and to produce dark foliage. I consider them an indispensable adjunct to a fertilizer for any eastern nursery; perhaps, however, on your soil they will not give so good a result as in the East. I ought

to add that bone meal does not act so quickly as some of the superphosphates or most of the high-grade fertilizers now on the market, but it will last for a longer time. I prefer to put bone meal in the row, but to thoroughly mix it with the soil before planting; by this means the roots remain close together and do not run so much as when the fertilizer is put on broadcast. Bone meal can be applied successfully to one-year-old trees if you first throw a furrow away from one side, scatter the meal in the furrow and then throw the furrow back.

Pears and Raspberries Together, and Fertilizers for Them—Standards and Dwarfs—Propagating the Le Conte Pear—Early Harvest Blackberry.—H. F. S., Blue Mound, Kansas, writes: "I have a five-acre piece of land which I am going to set out in raspberries next spring, and also want to set out pear trees on the same ground. I would like to know if the manure and cultivation required to raise a good crop of berries would be detrimental to the pear trees. Some western nurserymen claim that it will not do to manure a pear orchard or give it very high cultivation in this part of the country, as it causes too late a growth in the fall and makes them winter-kill. How would it do to set standards 20 by 24 feet and dwarfs between, making them 12 by 20? What varieties do you think would do best here? Please give directions for propagating the Le Conte pear from cuttings.—Will the Early Harvest blackberry bear the first year after setting?"

REPLY:—Your pear trees will require as much manure as the raspberries. Nitrogenous manures, stable manure for instance, have a tendency to produce a late fall growth and should therefore be sparingly used on good soil. Mineral manure, such as unleached wood ashes, are very excellent for berries, and also for pear trees, and have a tendency to produce well ripened, hard wood. If your soil is light or has been heavily cropped it may be well to use some stable manure. If it is good enough to grow a good crop of corn, do not add any, but use wood ashes or some mineral commercial fertilizer, lacking in nitrogen, but having potash and phosphoric acid in abundance. It would be all right to put the standards 20 by 24 feet and then to put in one dwarf between them one way, but I do not take much stock in dwarfs for marketing purposes; they are most desirable in the small garden, where early bearing is demanded. As for the varieties to use, you had better be guided somewhat by the experience of your neighbors, but I suggest that you try Clapp's Favorite and Early Harvest for summer use; Bartlett, Flemish Beauty and Keiffer for the medium season and Vicar, Anjou, Lawrence and Seckel for late season. The Le Conte pear may be propagated by taking off late in the fall good, sound wood of the new growth about eight inches long; heel-in in dry soil until spring. If in spring they are calloused, plant out in sandy, moist soil. If not calloused, turn the cuttings bottom end up and cover the butt ends with about two inches of soil and on top put about a foot of best manure; this will promote callousing. Plant out as soon as calloused.—In my experience the Early Harvest blackberry bears rather slowly until after the second year, but it is a very desirable berry.

Queries on Peach Culture.—D. C. A., Moavequa, Ill., writes: "(1) What treatment will be best to give young, budded peach trees set last spring, in rich soil in which a small quantity of unleached ashes (wood) was mixed? Our soil is black loam without sand or lime. (2) Is there need of lime in the soil for peach trees? If so, what kind, and how and when should it be applied? Is barn-yard manure good for peach trees; also, chicken manure, and when is the best time to apply either of them? (3) What is the cause and the remedy for peaches having one black or dark side, that has a wilted or tough feeling, the skin being dark and the flesh tough and not as juicy as the other side of the peach? All the peaches I have seen here have one dark side, whether early or late, free or cling, white or yellow. The trees look healthy and there is no sign of yellows or leaf curl. (4) When is the best time to trim peach trees, old or young? If unleached wood ashes are spread abundantly on the ground around the trees—not dug in the soil—will it be of much benefit? (5) Are soft-wood ashes of any use for peach trees?"

REPLY:—(1) Do not cultivate after the first of September, but allow the wood to ripen naturally. Earth up around them twelve inches high, to protect them from mice, just before cold weather sets in. In the spring cultivate the land and apply more wood ashes, if the soil is not rich, but be careful and not over-mannure. (2) The wood ashes you add will contain more than enough lime for the trees, though probably there is a plenty in your soil. If lime were added it would start chemical action too rapidly, set too much plant food free and produce a sappy growth. Barn-yard manure is good for peach trees on dry soil where there is a lack of humus and nitrogen, but in your case I think your soil, which you say is a black loam, would not be improved for peaches by its application. Neither would I use chicken manure for the same reason. Some manures are rich in nitrogen, and tend to promote a rapid but soft growth, which is liable to be injured in the winter. (3) Do not know what causes peaches to be tough on one side, but think generally it is due to the trees being weakened by overbearing. I would suggest thinning the fruit as a partial remedy. (4) Probably your best time to trim peach trees is during the winter and before the sap commences to flow in the spring, or most any time after the leaves have fallen. (5) Unleached ashes had best be dug into the soil, for they are then situated so that they are easily changed by chemical action, which takes place much more rapidly in the soil than in the air. Soft-coal ashes are not of any value except to work in and around the trees and so make the soil light and loose if it is too compact. To keep hoppers out of peach trees, apply to the trunks a whitewash made of plaster of Paris, to which has been added three spoonfuls of Paris green to each bucketful.

EXTRACTS
FROM CORRESPONDENCE.

SOUTH-WESTERN LOUISIANA.—Without a doubt, this state, and particularly Attakapas county, has reason to claim priority in as far as climate and productiveness are concerned. After this, I stop. The climate is salubrious, the soil is applicable to profit in all products now cultivated, also others not yet tried. Fruits, such as peaches, pears, apples, plums, bananas, oranges and figs, do well with slight attention. Cane and cotton are the staple products, and yield well. Still, with all these advantages, contentment lies dormant. This drawback confirms that "there is something rotten in Denmark." Being one of the well wishers of our great state, I live in hopes that these eruptions may soon be quelled, while prevent immigration from flowing in.

New Iberia, La.

W. P. D.

FROM KANSAS.—Cloud county is said to be a fair sample of the state, and I will say that this year has been one of great excellence for the farming communities. But as there has been two years of almost total failures, of course, the present good crops will not more than pay off the usury on borrowed money. I am not a grumbler nor a loafer, but being engaged in teaching (which is the best paying business in Kansas except that of the banker), of course I have been able to do a great deal of observing and know whereof I speak. The soil of this part is excellent for most purposes, and farmers have concluded that "variety is the spice of life," and now try wheat, oats, corn, sorghum, and occasionally one tries broom corn. Vegetables have been a good crop this year, and those having orchards have been blessed with good apples and peaches and plenty of them. There is a good class of people living here, and there are good school privileges.

Scottsville, Kansas.

A. P.

FROM MINNESOTA.—Todd county lies in the renowned Park region of Minnesota. It has numerous lakes and an abundance of good water, free from alkali. The county is mostly all level, black loam and clay soil, with clay subsoil. We have some prairie and fine meadow lands, but the county is mostly covered with heavy, hard-wood timber, which gives the husbandman a profitable employment in the winter, cutting railroad ties and cordwood, which are shipped to North Dakota. The timber, in this way, will help to pay for the land and clearing. When cleared it is a splendid wheat raising country. Oats, barley, corn, etc., all do well here. This has been a very dry season for us, but our wheat yield on prairie lands averaged from eighteen to twenty-five bushels, and in the timber sections from twenty to thirty bushels per acre. Stock raising is carried on extensively, but what we need badly to make this more profitable are creameries, or cheese factories. For either of these there is a good opening. We have good schools and churches all over the county, but need honest and industrious neighbors to come and settle up and cultivate the thousands of acres of good, wild lands around here close to markets, which can be bought at from \$3 to \$6 per acre on easy terms. Todd county has the resources to make it one of the best counties in Minnesota, but to make it that we want more A No. 1 farmers, and for such there are good openings.

J. J. O.

Long Prairie, Minn.

FROM VIRGINIA.—The first and greatest advantage of this section is our unexcelled climate. In winter it is generally cold enough for housing lee, if one is quick about it, and our summer and fall weather is the invalid's paradise. I do not say there are no sick people here, but it is our own fault—for with proper drainage (which is easily done), no one need be sick. Matthews county is nearly surrounded by water; it has many streams of salt water (deep and pure tide water), and three fourths of the dwellings in Matthews county are upon watercourses sufficient to grow oysters in, and if necessary, to catch a fish for breakfast from. We have no floods, no drouths, no blizzards. All kinds of fruit, berries and the cereals grow well here. This is an excellent grazing country. A crop (sixty bushels of corn per acre) is often grown by using fish manure. To make this county equal to any on our continent needs only money and energy. Nature has done so much as to induce our people to do but little. A man can take his boat, sail out into our bay, catch from five to twenty dollars worth of oysters, and be home for early supper. Land is cheap and much of it on the market. Good citizens are welcome here, but it is no place for tramps; and more, we are not uneasy about the race problem.

Z. H. P.

Hudgins, Va.

FROM SOUTH-WESTERN IOWA.—Adams county, with its 270,000 acres of land, of which 95 percent is tillable, has about 15,000 inhabitants. The larger proportion of the residents came from Ohio, Indiana and Illinois, though there is a goodly representation of New Englanders and New Yorkers, and, in fact, every state in the Union has contributed in making up our muster-roll. Corning, the county-seat, is a nice little town of 1,500 inhab-

itants, situated on the C., B. & Q. railroad. Corn is one of the cereal crops of Iowa. Of course there are good and poor and indifferent farmers, and the crops range accordingly. Corn yields from 30 to 65 bushels per acre, and ranges in price from 20 to 40 cents per bushel. Corn will be cheap again this fall, but little of it is marketed. Most of the farmers have cattle and hogs to eat what they raise, and that is the most profitable way when it is properly managed. This is a splendid oats country. Oats yielded this year from 35 to 70 bushels per acre, but they were badly damaged by rain before and after they were cut. Farmers have quit raising spring wheat and turned their attention to fall wheat. Adams county is hard to beat for grass. Tame grasses of all kinds do well. This seems to be the home of Blue grass. Horses will not do well on it the year around. Iowa has some of the finest Clydesdales, English Shires and Percherons to be found on this side of the Atlantic. Adams county has an abundance of coal, there being fifteen mines in operation. The shafts run from ten to fifty feet deep; the prices range from 7 to 10 cents a bushel at the mines. There is timber along the streams and on the roughest land. Farms rent for the one third, or from \$2 to \$2.25 per acre. Land sells from \$25 to \$40 per acre, according to improvements and distance from town. This is a nice place to live in the summer time and would be in the winter time if it wasn't for the blizzards; they will come in spite of everything; but still, I would rather live here than in south-western Ohio, where we came from eight years ago. People go from here West and South to different states, live there awhile and then come back to old Iowa, willing to make their home here.

Corning, Iowa.

F. E. M.

FROM FLORIDA.—I am always anxious to see FARM AND FIRESIDE, and especially interested in the correspondence page. I like to hear from all parts of the country. I confess to be somewhat amused to learn of so many people living in the best country and the best climate and the healthiest place in the world. I think the most of those people have not been all over the world to see. Why don't they give us the range of the thermometer? That always tells the truth. It is useless to talk to me about the best climate, where mercury gets up over 100 degrees in the shade and below zero in a short time. Untimely deaths and sickness must be the result of all such changes. The United States census gives Florida a less death rate than any other state in the Union, only one territory having so low a mortality, and that because the population is nearly all men and but few children. Our mango crop is past. Two crops a year; one comes off in July, the other in August. The Avocado pear is just coming in. The heaviest crop of pineapples came off in June, July and August, and a few ripen all the year. One never gets a good pineapple until he gets one ripened on the stalk, and it is said, he never tastes a perfect luxury till he tastes a pineapple pie. None but the smaller varieties have fruited for me yet, the Scarlet Spanish and the Sugar Loaf. I planted them at the rate of about 8,000 per acre, and about 80 per cent of mine bear fruit from two to eleven pounds in weight, mostly three to four pounds. My largest Sugar Loaves this year run from six to eleven pounds apiece, and I sold them here, in a pineapple country, for 50, 60 and 65 cents apiece. A very profitable way to use them is to work them up into conserve, jelly, marmalade, extract, sweet pickles and wine. Our guava crop began to ripen heavily about July 20th, and after October 20th they will ripen scattering till next July. A canning factory was lately put up here, and they pay one cent a pound for our guavas and go after them; about one half as much as they could afford to give. I find a four-year-old tree will turn off two pounds of fruit a day, or \$3 a day per acre, of four hundred trees. The guava is the best fruit I ever saw, for all purposes, and grows without enemies or much care. This is our delightful summer weather, often called the rainy season, from the frequency of showers. The temperature varies from 70 to 85 degrees, rarely up to 90. This is about the winding up of our rainy season. We will expect a rain about once in two weeks until next June. In winter we look for mercury to get down to 50 degrees above zero, once in a while, rarely down to 40. Vegetation grows all the year. Fresh vegetables from the garden and berries and fruit from the orchard every day of the year. This is the healthiest country I ever saw. If any other country is healthier, I have not found it out. May 1st we took the census and found 47 Negroes and 481 white people, and not a sick person in town. We have built 16 new buildings during the summer and many others are going up. A government experiment station is going up and plans and specifications are out for a \$20,000 court house. Two new church houses are going up and more to follow. I have never been in any county where morals, schools or church privileges were better. We have nine cash stores, all told, and some do a business of \$40,000 a year. Hunters, fishermen and citizens come from the coast and up the Caloosahatchee one hundred miles, to trade. Where does the money come from? Perhaps your readers have not learned that there is more money here than in

any other town of its size in the United States. Our people sell fruits, vegetables, sugar and molasses. We sell bird plumes, alligator skins and curiosities to the amount of \$50,000 a year, the money coming from New York, London and Paris. Our cattlemen sell \$200,000 worth of cattle every year. We have six cattle kings in town, and I almost said they raise one hundred thousand cattle in Lee county, but that would be a mistake, as the hogs and cattle raise themselves. We have two saw-mills and want two or three more. We want a shoemaker and a hardware store, a boot and shoe store, a dentist, two or three canning factories, a saddle and harness store, a machine shop and furniture factory; we want a factory to work up sisal hemp into binding twine and ropes; we want all the people we can get to cultivate our soil for rice, sugar cane, bananas, strawberries, pineapples, tea, coffee and all tropical fruits and products; we want ten thousand people to can up sardines and oysters; we do not want a boom, but we want a steady growth of sensible people, that are less afraid of Yellow Jack than they are of White Jack, a more deadly foe to man.

Fort Myers, Fla.

L. C. W.

FROM ARKANSAS.—Grand Prairie is a new country, although all around its borders are still to be found traces of old plantations. The old slave-holding element was here in a thriving condition thirty or forty years ago, but with the loss of their slaves they did not develop the energy necessary to keep things moving, and so the country "sort of backslid." Now the coming of the Yankee has awakened new life and stirred up a genuine revival in all lines of business, and lands that have been idle for twenty years and considered of little worth, are now taking on real value and are rapidly being settled up with thrifty, well-to-do people from the North. Some of these lands were once valuable cotton plantations, yielding large incomes to their owners, but the loss of slaves, in nearly all cases, banished the income, and you can now find many relics of old plantation aristocracy about the timber country, seemingly content with a very meagre bill of fare for their bodily sustenance, but feasting sumptuously on memories of "the good ole times befo' the wah." But the wide-awake Yankee has grasped the situation, brought hither his pluck and zeal, and the old plantation produces even more largely in cotton and corn, for under the rejuvenating methods of the progressive northern farmer these lands quickly return to the productiveness of ante-bellum days. The lasting fertility of this soil is truly remarkable. I know of many of these old fields where cotton has been raised continuously, without any fertilizing, for thirty or forty years, and still produce an average of about three hundred and seventy-five pounds to the acre; this, at ten cents per pound, makes a fairly profitable crop for "old, worn-out land." The question, "Why has not this prairie been settled up before?" is always propounded by the new-comer who visits this country for the first time. There are a number of answers to this question. The southern planter is very loth to depart from the customs of his forefathers, and the custom in starting plantations is to "deaden" the timber, "clear up" the underbrush and saplings, and the field is ready to prepare for the first "crop" of corn or cotton. The darkey and mule, and little "bull-tongue plow," manage somehow, in the loose soil of the woods, to throw up a "bed" for the rows, but they are no match for the tough, matted sod of the prairie. Besides, as in the more fertile portions of Iowa, Illinois, Indiana and Ohio, a certain amount of ditching is needed to be done to insure the best results on this prairie land, and it is a woful fact, that your genuine southerner fools away no time on roads and ditches. So that, since the settlement of the state, although Grand Prairie has afforded the finest grazing for the surrounding plantations and hay in endless quantities, and has been the hunter's paradise for deer, prairie chickens, quail and rabbit, yet for the purposes of the planter it has been considered of "no 'count nohow." Within the past few years the feelings generated by the "late unpleasantness" having become sufficiently mollified to make tolerable the presence of the Yankee, with his brawn and brain, a wonderful change has taken place, and it has developed the fact that this prairie can produce corn and cotton fully equal to the timber farms. There are new prairie farms that will yield from forty to seventy-five bushels of corn, or a bale of cotton, per acre. Oats are a sure crop here and average from forty to sixty bushels and wheat from twenty to forty bushels to the acre. All kinds of grain do well. Fruit raising and gardening are fast becoming prominent pursuits. No finer apples, peaches, quinces and pears can be found than grow here. From \$300 to \$700 per acre, net profit, is no uncommon yield for strawberries. All vegetables yield enormously. A rate of five hundred bushels of sweet potatoes per acre, fully equal in quality to the finest Jerseys, is of common occurrence. Fine fruit and garden lands can be bought near the railroad at from \$10 to \$15 per acre, and farm and ranch lands, farther away, at from \$5 to \$10. Health is good here and there is but little sickness, aside from the occasional chills incident to new countries,

is heard of. Numerous creeks afford abundance of water for stock most of the year, and well water is obtained at depths varying from thirty to eighty feet and very pure. Our public school system is good, and educational and church matters receive fully as much attention as at the North. Grand Prairie is a most beautiful country. It is settled almost entirely thus far by northern people. Its rich soil, mild climate and cheap lands make it attractive to all classes of settlers. We have advantages of good railroads and good markets. We have room for a thousand families of good, industrious, moral, wide-awake people, and we don't want any other kind. Shiftlessness is here in sufficient quantity already.

R. S. G.

Ulm, Arkansas.

WALL PAPER BY MAIL.

No doubt many of our readers will be surprised when they read the advertisement of Messrs. M. M. Kayser & Co., manufacturers of wall papers, to learn that they can buy that article as low as five cents per piece. Their gold paper at ten cents is certainly a fine article, and it is remarkable that so fine a paper can be furnished at such little cost.

They used to send samples to any one who would send their name and address, but on account of so many children sending for samples out of mere curiosity, they now offer to send a full line of samples by mail to any one who will send their name and address and eight cents in stamps, which amount covers postage and packing, and should the person receiving samples purchase they give them credit for that amount on their first order. Since adopting that plan they only hear from those thinking about papering their houses, and in most cases receive orders from those receiving samples. When you call or write to their salesrooms, 406, 408 and 410 Arch street, Philadelphia, be sure and mention the FARM AND FIRESIDE, as they advertise a special low price list in this paper.

Be cheerful and happy at meals. "Cheerfulness is full of significance; it suggests good health, a clear conscience and a soul at peace with all human nature." Cheerfulness is the mother of good digestion.

CATARRH CURED.

A clergyman, after years of suffering from that loathsome disease Catarrh, and vainly trying every known remedy, at last found a prescription which completely cured and saved him from death. Any sufferer from this dreadful disease sending a self-addressed stamped envelope to Prof. J. A. Lawrence, 83 Warren street, New York, will receive the recipe free of charge.

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When any one takes advantage of the above offer, the person securing and sending the **new** subscriber is not entitled to any other premium or reward except one year's subscription to this paper, but the **new** subscriber can take any premium offered in connection with the paper, by paying the **regular** price for the paper, including the premium wanted; for example, the regular price of the grand picture, "Christ Before Pilate," and one year's subscription to this paper, is 75 cents. The **new** subscriber can have the paper and the picture by paying 75 cents, and the person that goes out and hunts up the **new** subscriber can have this paper one year free as a reward for his trouble, but is not entitled to any other premium or reward.

The above offer applies to this paper only, and both subscriptions must be for this paper.

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FARM AND FIRESIDE,
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NEW FOUNTAIN PEN.

Pen, Penholder, and
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Holds ink enough to write 24 sheets paper without refilling. Uses any pen or kind of ink; filled by a automatic action of Indian rubber reservoir; folds itself by pressure of writing; carries in the pocket safely; will not leak; finely finished in nickel-plate; superior to a \$2 Stylographic pen; sells with a rush. Samples, postpaid, 25 cents. Catalogue Agents Good free.

G. H. W. BATES & CO., 74 Pearl Street, BOSTON, MASS.

HORSE BLANKET HOLDER.

Keeps the blanket from blowing or sliding off the horse. Attached to any blanket in a moment. Ornamental nickel plate. Nothing like it in the market. A gold mine for agents. Sample set, 25 cents. One dozen sets, \$2.00 by mail. Stamps taken. Retail at 50 cents a set. **STAYNER & CO., Providence, R. I.**

Our Fireside.

THE ROMANCE OF A BUTTON.

He was about to say adieu,
Was thinking of some word to flatter,
When from his overcoat there flew
A button with a dismal clatter.

He blushed, but she, with woman's tact,
As if she saw a good joke in it,
Cried, laughingly, "There, now, I'll act
Your tailor's part for just a minute."

He doffed the coat and watched her thread
The needle, with her head low bending.
"Now, do you know," he softly said,
"I have an awful lot of mending?"

"A hachelor, we'll say, like me,
Is at the mercy of his tailor,
And then there's something else, you see,
(At this he turned a trifle paler).

"My heart needs mending much, I fear;
Do you suppose that you could do it?"
"Well, I don't know," she mused, "but dear,
"I'll give my whole attention to it."

A CHILD OF NATURE.

BY JEANNETTE H. WALWORTH.

Author of "Southern Silhouettes," "True to Herself," "The Silent Witness," "A Strange Pilgrimage," Etc., Etc.

CHAPTER I.

LEFT IN THE LURCH.



HERE'S a go."
"I cannot agree with you, my friend. I should say, on the contrary, here is not a go. We seem to be absolutely stationary."

"You are right, considering that we were aiming for a town five miles further down the river, and find ourselves left in the lurch in front of a private residence on an out-of-the-way plantation."

"Our oarsmen seemed to find it very much in the way."

"So they did, deuce take the tipsy rascals."

"But I say, Mr. Dodge, I must take exceptions to another little inaccuracy of yours. Do you call this in front of a private residence?"

"There's the house over there," said Dodge. "You see that big pile with a lot of trees around it?"

"And just about two miles of mud between us and it?"

"More or less."

"Yes, I see it."

It required the brightest sunshine, the balmyest of skies, the clearest of atmospheres, and all the other adventitious aids to comeliness which nature sometimes lends her most neglected children, to redeem the spot upon which this terse dialogue took place from absolute dreariness.

Those adventitious aids were all absent on that cold, gray, wintry dusk, and the two men, who were standing quite still, in a somewhat bewildered frame of mind, in the middle of the lonely plantation wagon-road, had occasionally to stamp their feet and blow upon their stiff fingers to keep them from becoming numb.

They would very willingly have pursued their steady onward course towards the house whose blackened shingle roof showed darkly above the tree tops, but the roads forked just where they had come to a stand-still, and they dared not trust to the tipsy boatmen who were presumably somewhere in the rear, with their luggage, to take the right turn. So they must wait for them.

"I say, Cooper," said the first speaker, vigorously swinging his long arms about, "I am trying to solve a riddle."

"You are? I should have said you were trying to keep from freezing."

"So I am, lucidentally, but that is a side issue."

He walked briskly down the frosty road for a few yards, and as briskly back.

"It won't do to lose sight of that skiff until our traps are all in sight. They are coming, each fellow staggering under the load of a valise and an umbrella."

"To say nothing of a pint or so of bad whiskey. But your riddle?"

"You are my riddle."

"I?"

"Yes. The riddle is, what are you doing here? I am the victim of misplaced confidence. I find myself in this infernal scrape in the conscientious performance of my legitimate duty; but the conundrum is, why did you put yourself in the way of such a mischance?"

"Mischance? Why, who knows what piece of good luck this thing you call mischance may open up to us? Come, cheer up, Dodge."

"But what are we going to say to those folks?" asked Dodge, not uncheerfully, but with a touch of impatience born of hunger and cold.

"The truth—always speak the truth when circumstances will permit. We are two belated travelers, who are journeying down the Mississippi river in their own skiff, considering that mode of progress more economical."

Here Dodge made a mental interruption not complimentary to his traveling companion.

"Economical? Why, that man is worth cords of money."

"The main reason, however," his companion resumed, after twisting his long moustache free from its frosty stiffness, "for my lending myself to your suggestion that we should travel in this fashion, is that it furnishes me facilities for seeing the country and gauging its future possibilities not otherwise obtainable. Then it leaves us at liberty to select our own stopping places, without having to wait days for another steamer."

"That all sounded very pretty when we were planning it, up at Memphis, but this don't look much as if we were at liberty to select our own stopping places. If we had been, we need not have found ourselves shivering outside the yard fence of a lot of threadbare aristocrats, afraid to ask a night's lodging."

"Afraid? Afraid of what? Do we look like tramps or disreputable characters of any description?"

Cooper surveyed himself and his companion uneasily. Dodge laughed with easy contempt for appearances.

"Oh, you would pass muster at a Delmonico hall. You can't rub the good looks off some men, nor the shine off their clothes. But I have traveled this road before, Mr. Cooper, and I know all the folks about here. I know the old man this place belongs to; his name is Upham. Ought to have been Uppish. You see that house, don't you?" he went on. "Fine old two-story, big-windowed affair. Hasn't had a coat of paint for twenty years. Perhaps if those shutters were all to swing open suddenly you would find half the window glass gone and one third the shutters minus hinges. Inside, you will find the ghosts of departed



THERE WAS A CRY OF HORROR FROM THE TWO MEN ON THE VERANDA, ECHOED BY A WOMAN'S SHRIEK.

splendors stalking about on threadbare carpets; but the owners of the ghosts and the threadbare carpets will meet you like unworried kings and queens, and they will make you feel small enough to be folded up and laid away in your own grip-sack. At least that is my experience."

By this time the two oarsmen, whose inability to row them to the point of their destination had cast Mr. Fenton Cooper and his traveling companion, Mr. Andrew Dodge, so unexpectedly in the neighborhood of the Upham mansion, came up with the luggage, and with many maudlin apologies, which no one took the trouble to listen to, offered to pilot them across the wide fields which still lay between them and the gloomy old pile, from whose lower windows a faint glimmer of light could be seen.

"You see," Dodge resumed, locking arms with his companion in trouble, by way of steadying their steps over the rough, rutted road, "a drummer is an offense in their nostrils; he is a creature of to-day, a thing without pedigree or precedent. He is scarcely legitimate in their eyes. His very briskness and external prosperity rasps their sensitive nerves. He is to them like a jumping-jack at a funeral, and the politer you get, the more exasperated they become. Oh, they're a study, they are."

"I imagine they have not been satiated with good fortune. I feel prepared to sympathize with them in advance."

"Satiated with good fortune!" Dodge's laugh rang out clearly. "These folks are poor, honest and proud. That's a pretty strong combination for keeping a man down in the world, I take it."

"If that is their condition, so much the

better for my purposes," said Cooper, plunging ahead recklessly in the rear of the men who were toiling towards the house, burdened with all the movables from the deserted skiff.

"Your purposes? I didn't know you had any. I thought, when I stumbled on you at Memphis, that you were a rich, young chap from New York, bound for New Orleans on a pleasure trip, and when you went partners in the skiff I thought it was just a fancy notion for seeing the country in your own way."

"I might be all that, and still have a purpose in view, might I not?"

"Yes, oh, yes; there's no statute of limitation to a man's mights in this country, I believe."

"The fact is, my accidental friend—" He stopped, then suddenly asked the question: "I can trust you, cannot I, Dodge?"

"What with?"

"A secret."

"Safely. Secrets have no commercial value, as a rule. I am strictly a commercial traveler, with a single eye to my employer's interests and my own comfort."

"Well, the matter stands thus: I have a fancy for investing in one of these big cotton places, whose owners are so impoverished that they will sell for a song."

"Old Upham won't. This is a thousand-bale place. Not that he makes it, but it can be made. And then, dismal as it all looks, it is the dearest spot on earth to three people."

"Who are they?"

"Old Upham, Mrs. Upham and their daughter, Una, a pretty little tom-boy of fifteen, or thereabouts."

"The size of the place is no drawback, but see, here, Dodge, I don't propose advertising myself as the possessor of means calculated to invite cupidity. I came along with you so as to benefit by your knowledge. We are both drummers, for the time being, you know."

"Take off your gloves; they muffle the sound."

Mr. Dodge was prolific of suggestions. Mr. Cooper accepted this one with readiness. He pulled off his glove and brought his bare, red knuckles in direct contact with the solid oak panel. The sound died away, and silence once more reigned supreme.

"Suppose we try a flank movement. This veranda runs all around the house. There's furlongs of it."

They tried a flank movement with similar ill success.

"Attack 'em in the rear. Guess they can't afford fires in the big parlors. Dining-room opens on the rear."

Mr. Dodge's evident familiarity with the premises proved imposing. Fenton Cooper followed him docilely the entire length of the long veranda. They finally came to a closed shutter, through whose slats light was visible.

"They are in there. Tap on the window; no door on this side. Easy, Cooper; might give 'em a start, you know. Visitors are sort of uncommon."

Cooper raised his hand to repeat the summons that had, so far, proved so vain. The shutter swung back suddenly, as he laid his hand on it, revealing a group of three persons within.

Both men stepped backward, involuntarily, until they stood without the line of lamp light. No one inside the room had noticed the swinging back of the heavy shutter. The sound it made was too dearly familiar of a winter's night.

"They are in trouble," whispered Dodge, his mouth close to Cooper's ear; "a peck of it, too, looks like."

"Evidently."

Fenton Cooper bared his head in presence of the trouble he could feel without understanding it. It's brooding wing seemed to envelop father, mother and child in visible gloom.

By a table, drawn close up to the blazing wood fire, whose dancing flames were the one thing cheerful in the whole of that large room, sat old Mr. Upham, his head dropped upon his folded arms, his attitude bespeaking absolute despair.

On the opposite side of the table, almost defiantly erect in her attitude, sat Mrs. Upham, still young and still handsome, but pale and tearful now as she pored over an open letter which was lying under the lamp on the table.

Leaning over her mother's shoulder, so that she, too, might master the contents of that disturbing letter, was the last of the Uphams, a slim girl of sixteen, whose ruddy hair and softly rounded cheeks were brought into sharp relief by the bright firelight.

"That is Una—wild as a colt. Pretty little thing, isn't she?" Dodge said, hissing.

"As sweet and pure looking as a little, white dove, Dodge," Fenton Cooper went on, vehemently, "I feel like a scoundrel. We can't ask these people to take us in; they are in deep waters. Can't we go somewhere else?"

But just then, Una, lifting herself from her stooping posture, put out pitying hands towards the old man on the other side of the table. Her eyes were full of angelic pity, and they could hear her speaking brave words of comfort in an eager, young voice:

"Papa, don't grieve. Let the old place go. We can work."

She swept towards him with outstretched arms. The space between the table and the fire was narrow, her garments were light, and the leaping flames were greedy. There was a cry of horror from the two men on the veranda, echoed shrilly by a woman's shriek.

With the unreasoning instinct of flight, Una, about whose slender form the licking tongues of flame were leaping, sped towards the only door of outlet. Fenton Cooper could never recall how he found that same door, but as it sprang open behind the flame-wrapped girl, he opened wide his arms, and enfolding her in his heavy, woolen ulster, grappled fiercely with the flames, which spared her, only to leave his brave, rescuing hands scorched and helpless.

CHAPTER II.

FENTON COOPER MAKES A BID.



R. ANDREW DODGE was reluctantly compelled to start anew on his travels, alone, after waiting several days for Fenton Cooper's worst wounds to heal. The good-hearted little, commercial traveler expressed his regrets warmly:

"It looks like base desertion."

Cooper, but you know my time is not my own, and you will do very well here as long as their gratitude holds out."

"And by the time that falls," said Cooper, smiling inscrutably, "I shall be quite ready to follow in your wake. Good-by, Dodge; I am sorry I have no hand to offer you."

He looked ruefully at the two white cushions, which, resting on the arms of his chair, represented his burned and poulticed hands. Then

Cooper tried it again, with no better results.

Dodge had gone away, leaving him entirely at the mercy of the Uphams.

Mrs. Upham, watching Dodge trudge solidly down the brick walk, with his grip-sack in his hand, turned to Mr. Upham and said, in a voice full of scarcely suppressed dissatisfaction:

"I wish it had been that one instead of the other one."

Mr. Upham, turning sideways in his revolving desk chair to address his wife with that stately courtesy which neither time nor adversity had deprived him of, found her gazing after Dodge's retreating figure with wistful eyes. Her slim, white hands were folded over a pile of tumbled black silk in her lap. Mr. Upham repeated her own words in a gently puzzled way:

"Wish it had been that one instead of the other one, my dear?"

"Yes, I wish that one had saved our foolish, careless Una, instead of the other one."

"Why, my dear?"

"Because that one," nodding towards Dodge's back, "is a drummer from the top of his derby hat to the toes of his square shoes—a pert, flippant, common-place young man to whom one could give a night's lodging and a breakfast, then forget all about him."

"And the other one? He is a drummer, too, wife. You know they say his sample-bag was left in the skiff."

"The other," said Mrs. Upham, "is a gentleman (she spoke authoritatively) in every sense of the word—an educated gentleman; a polished man with manners not acquired in trade circles; a young man and a handsome one—exceedingly handsome. His smile is absolutely fascinating. Mr. Upham, he is a dangerous man. I suppose it will be some time before he is able to travel."

"Weeks. His hands are abominably burned. But, wife, you don't grudge him the little trouble he will put us to?"

"I was not thinking of the trouble, Mr. Upham. It is so hard to make men understand; everything must be put into bald words."

Mrs. Upham's brow contracted gloomily, and with a somewhat vicious jerk to the old, silk skirt she was remodeling, she resumed work upon it.

"Not thinking of the trouble? What then?"

Mr. Upham held his pen suspended. He was formulating an answer to the letter which had plunged them all into the depths of the night of Una's accident. It was not an easy letter to answer. The man who held the heaviest mortgages on his place had threatened to foreclose, and he must be mollified in some way.

"I was thinking of Una," said Mrs. Upham, crisply. "It is so easy for a girl to make a fool of herself over a handsome man who has saved her life. If it had only been the other one, now! No girl could possibly have made a fool of herself over him."

"Oh, I see. Bless me, Una is such a baby! Is that all?"

"That is all at present, Mr. Upham."

Mr. Upham laughed, in a relieved way, and turning once more towards his desk, was soon deep in figures and in protests. The scratching of his steel pen and the snipping of Mrs. Upham's scissors, as she ripped and cut at the garment she was remodeling, were the only sounds which broke the silence for quite a while. Then the door opened, and Una came in so slowly and quietly that father and mother both looked up in surprise.

Una's entrances and exits were generally somewhat tempestuous. She had her little, brown hands full of white and yellow chrysanthemums. Her big, straw hat was lying on the back of her head. Her pretty cheeks were all aglow, and her eyes—those deep, true, violet eyes which look almost black at moments of excitement, or under certain lights—were aglow now with an excitement not altogether pleasurable. She flung herself on the sofa, which was littered with the dismembered silk dress, and began pulling the flowers to pieces with reckless fingers. Mrs. Upham protested:

"Don't do that, Una; put them in water. They will stop blooming soon, and then you will be glad enough of a single one of those blossoms you are destroying now." She reached over to rescue the flowers.

"I got them for him, but I wouldn't give them to him now to save his life," said the girl, passionately flinging the flowers into her mother's lap. "I hate him!"

"Got them for him?"

"Yes, for Mr. Cooper. You see, it must be awful stupid to sit up there all day with his hands done up in oil and cotton, and so, as I passed his window, I asked him if he liked chrysanthemums. He said yes, but—he laughed—no, he didn't just exactly laugh, but there was a queer look in his eyes, and it made me feel hot all over. I know he wanted to laugh."

"I suppose it was because you said chrysanthemums instead of chrysanthemums. But it was very impertinent of him to notice it. Commercial men have so little breeding."

"I don't think he meant to be rude, mamma," said Una, quick always to do justice. "It didn't seem so, only I knew I had made some sort of mistake, and then, oh, mother!" She put her brown hands up over her hot cheeks, and when she took them down again,

tears were shining in her bright eyes. "When I came back along the veranda he was standing by the window with a book which he had managed to get open with his poor, bundled-up hands, and he said, with a laugh—mamma, think of it—that as he found turning the leaves with his nose rather slow work, he was going to ask me if I wouldn't read to him a little every day. And I said 'no.'"

"I think you might, daughter. It would take a very little of your time," said Mr. Upham, coaxingly; "and we owe him so much."

"I owe him everything, everything—my very life; but, father, did you want me to disgrace myself? Do you suppose I'm going to give him something to laugh at every day? Oh, I'm the most ignorant creature that ever lived, papa; I don't know nothing. But I wasn't unhappy about it until he came here, and I saw how different things might be. Oh, I hate myself! What have I been doing with myself all these sixteen years? I'm a dolt, an ignorant duncie."

With one of those sudden impulses of hers, which no one was ever quite prepared for, Una reached towards her mother, and took possession of her flowers once more.

"I didn't treat him right, mother; I left him standing at the window looking so surprised and sorrowful, with his poor, burnt hands—burnt for me, mother—lying helpless on the window-sill. I am going to beg his pardon."

She was gone, making her exit with impetuous haste.

"What did I tell you, Mr. Upham?"

"What did you tell me, my dear?" Mr. Upham laid down his pen in despair.

"That young man is dangerous, very dangerous. I really don't know but what it is my duty to send Una over to Charles' until this young drummer is able to go away. A drummer! My poor, benighted child!"

"Una is a trifle benighted," Mr. Upham admitted, cordially. "We've been so taken up with our debts and our troubles since she was

personally addressed, but evidently his mind was far enough away from his wife's plaintive retrospection. He always dreaded this rolling back of the wheel."

"Yes, wife, yes, I remember Emma, perfectly; but as you truly say, the hair is gone, now, and Emma is gray, or would be if she was alive. Una, my darling, will you inquire if we are likely to have any supper to-night?"

Una sprang up with alacrity. She was anxious for an opportunity to indulge in the hysterical laughter she dared not give way to before her mother, at her mother's expense. In her transit from the sofa to the door she managed to strew the floor with wreckage, which Mr. Upham patiently gathered up after her. A book knocked off the table, a pair of scissors and several spoons spilled from her lap, together with the house cat, which had added itself to the accumulation therein.

"You are the patientest papa in the world," she said, shaking herself free from the silk snippings, "and deserve better treatment from mamma and me."

"A perfect child of nature," said Mrs. Upham, looking after her sorrowfully. "There's no knowing what might have been made of her under happier auspices. To think that a daughter of mine should have to set tables and bring in meals!"

"She might do a great deal worse, wife. Not that I would not rather see her doing a great deal better."

"Worse? I should like you to tell me how she could do worse."

"She might be where there was no table to set, nor anything to put on it if it was set."

"Oh, yes, I suppose she might have been born in a thatched hut in Ireland, where people starve to death on one cow, one pig and a peck of potatoes."

"Slow death, that. But, wife, I sent Una out of the room to tell you I've changed my mind about that letter." He nodded towards the desk. "That fellow only holds a mortgage for twenty-five thousand dollars on the place, and I was writing a whine, begging him to hold over for this crop."

"Well, if he won't, I don't know what will become of us."

"I've concluded to let him foreclose. We'll sell out, wife, and devote the surplus to Una's education. When a girl gets to shedding tears over her grammar, or want of it, I think it's time something was being done with her, and I'm going to do it. I'm going to sell out."

The long, French windows that opened upon the veranda were opened to let in the mild winter's sunlight. Fenton Cooper, slowly making the circuit of the side veranda, with



"I WISH IT HAD BEEN THAT ONE, INSTEAD OF THE OTHER ONE."

a wee thing, wife, that we haven't given her education the thought it required. But she never seemed to mind it until now."

"No, she never seemed to mind it until now." But Una was back upon them again before her mother could say anything more.

"I feel better," said the girl, sitting down on the sofa with uncalled-for vigor. "I've made it all right with him. He looked surprised, but grateful. I was a wretch to him, mamma, and he so good and brave."

She was all smiles now, and made honest offers of assistance to her mother, which resulted principally in a rapid accumulation of working material in her lap, which she did not in the least know how to use.

"Mamma calls this an old silk rag, papa, but it looks awful fine to me, who never had nothing better than an alpaca in my life. I'd feel like a queen if I had a silk dress. Don't believe I would know how to walk in one."

"Awful fine, and never had nothing!" Mrs. Upham groaned.

Una blushed. It was new for her to wince at her own deficiencies. Mr. Upham came over and stroked her head tenderly.

"It isn't Una's fault that she hasn't been to school, mother. Would you like to go, daughter?"

"Would I like to go, papa? Oh!" She clasped her hands eagerly, then burst into a hysterical laugh. "But then, what's the use of talking. We are as poor as church mice, and I've got about as much chance of going to boarding-school as I have of going to the moon. Won't mamma look fine when she gets this made over, papa?"

"You may well say when she gets it made over, child. That will be about midsummer, when it will be entirely too hot to wear it. Before the war I would have had Emma at hand to rip it up and make it over, too."

"Who was Emma, mamma?"

Not that Una did not know the full list of Emma's perfections by rote, but she was under the strong necessity of keeping the talk flowing away from herself. The tears were still very near surface. Mrs. Upham brightened up over the recollection of her lost "treasure."

"Emma? Why, she was just the most perfect jewel of a servant. My poor child, you will never see her like. She was seamstress, hair-dresser and lady's maid all in one. Mr. Upham, do you remember how beautifully Emma did my hair? Dear me, Emma's gone and the hair's gray, now!"

Mr. Upham, pacing absently up and down the long room, paused on hearing himself

his bandaged hands folded helplessly across his broad chest, heard the old man's excited voice, and came a little nearer in time to hear Mrs. Upham's excited protest:

"Sell this place, Mr. Upham? Sell this place, where you brought me a bride? This place, where Una was born?"

"For Una's sake, yes," said the old man, resolutely. "And if I can find a man big enough duncie to want it, I'd sell out tomorrow, though it would hurt, wife; yes, it would hurt."

Fenton Cooper's handsome face was suddenly framed in the open window. He looked pleasantly in upon the Uphams.

"I could not help hearing what you were saying, Mr. Upham. Did you mean it?" he asked, frankly.

"Mean that I want to sell out?"

"Yes, sir."

"It is a sort of forced hand, young man. I'd rather not. I'd rather be sure that when my summons came, they would just have to carry me across the yard, yonder, and lay me to rest under the myrtles I've planted myself on the spot where I wanted to sleep. But for Una's sake I'll forego all that. I've been plotting and planning for this half a century. The child cried to-day because—"

"Mr. Upham!"

Mrs. Upham's tones were pitched in such a key of warning that Mr. Upham was halted on the threshold of a great indiscretion.

"I only wanted to ask you to wait two weeks," said Fenton Cooper, "before sacrificing your place unnecessarily."

"I am likely to wait much longer than that," said the old man, with a touch of bitterness in his gentle voice. "Men with money don't grow on the blackberry bushes hereabouts."

"And yet I think I have a friend who would like to invest in just such a place as this. To-night we might talk the matter over, if you are in earnest."

Then he withdrew, and they could hear him pacing slowly up and down the veranda on his own side of the premises.

Mr. Upham entertained a wholesome respect for Mrs. Upham's astuteness in business matters, and he asked her now, anxiously, what she thought of it. Her answer was not reassuring:

"Think of it! If he was anything but a drummer, I might think there was something in it. But, Mr. Upham, is it likely, now, that a poor, peripatetic, commercial traveler should have a friend who could buy this place?"

"There's no knowing, wife, no knowing. But for Una's sake I am willing to catch at any straw."

"And for Una's sake I wish that young man

would get well quickly and go away. What old woman as I am, I find myself watching that boy's face with positive fascination; his smile lights it up so. It is quite ridiculous."

"It is quite shocking," said Mr. Upham, in a voice of solemn rebuke, which was nullified by the twinkle in his kind, old eyes. "But, my dear, I am quite convinced—"

The sentence was never finished. An awful sound froze the words upon the old man's lips, and made husband and wife gaze at each other in turn. It was one loud reverberation, like the discharge of an immense cannon close at hand. The distant woods caught the sound and sent it back in a low, lingering echo. Then all was still.

"My God!" exclaimed the old man, with dry, parched lips, but Mrs. Upham was speechless.

[To be continued.]

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Our Household.

ONLY ONE.

Who knows of the steps it takes
To keep the home together?
Who knows of the work it makes?
Only one—the mother.

Who listens to childish woes,
Which kisses only smother;
Who's pained by naughty blows?
Only one—the mother.

Who knows of the untiring care
Bestowed on baby brother?
Who knows of the tender prayer?
Only one—the mother.

Who knows of the lesson taught
Of loving one another;
Who knows of patience sought?
Only one—the mother.

Who knows of the anxious fears
Lest darling may not weather
The storm of life in after years?
Only one—the mother.

Who kneels at the throne above
To thank the Heavenly Father
For that sweetest gift—a mother's love?
Only one—the mother.

—Home Journal.

DRAWN WORK.

(Continued.)

A BORDER AND CORNER.

To work this pattern as illustrated, use linen with forty-five threads to the inch. After it is decided how far the drawing is to begin from the hem or edge of work, begin at corner, cut 20 threads each way. Draw these out for full length of border, leave 20 next, cut 20, leave 20, cut the third 20. After these threads are all out, do the same for the other side or sides; then remove the short, crosswise threads, which can now be easily done. Next work the button-holes; then baste firmly to paper or leather, working only one side at a time. Twist the lengthwise threads first, fastening the thread in the button-hole edge at either end. Then twist the threads in the width of border. For the third crossing begin at a corner, putting the working threads together as they cross; bring the needle to the surface of the linen block, pass it through at the opposite corner, leaving the working thread on the surface. After the third threads are all in, work the fourth in the same way, adding a small cross in the center of each plain block, and carrying the working thread over and under the five threads which form the wheel in the open spaces, and fastening as if with a button-hole stitch before carrying the sixth thread to the corner of the block. Do not fasten the thread and cut it with each short line, but carry it carefully along the under edges of the work.

The illustration will give an idea of the

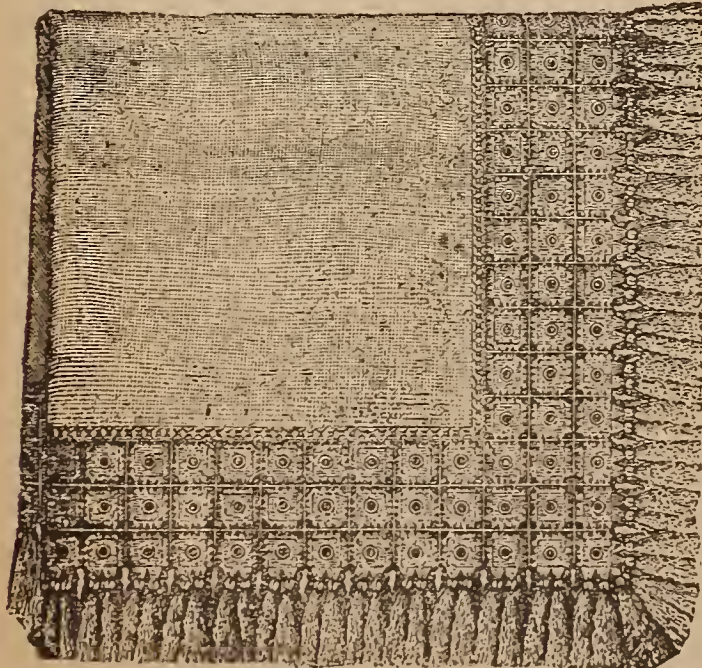


TABLE COVER WITH DRAWN-WORK BORDER.

beauty of this pattern. It is pretty for pillow-shams or cases, as the border can be increased to any width desired, and a square or oblong block worked in the center of the case. Placed over a blue or pink pillow, the effect is almost equal to lace.

TABLE-COVER WITH DRAWN-WORK BORDER.

This shows a linen table-cover with a border in punto-tirato, and with a fringe along the edge of this border. Leave a

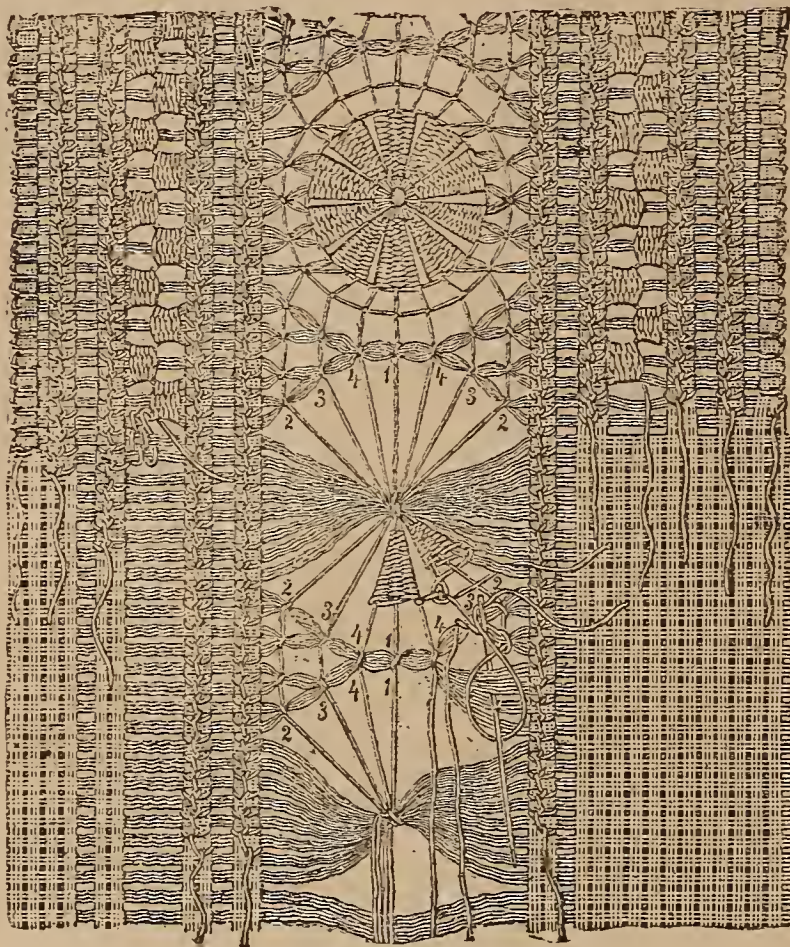
space of material for the fringe. Then count 40 threads. Do not draw them, but draw the following 20 woven threads in the width and the length of the material. Leave next 40 woven threads. Draw following 20. Repeat once more.

Work a linen thread through the center of every drawn space, dividing the woven threads into clusters by knotting the linen thread every time around the center of 10 threads taken together. The two linen threads crossing each other in the center of every open square have to be knotted in their center.

Work with cord stitch an open circle in the center of every block of material.

DETAILED WORK OF COVER.

Use embroidery cotton for this. When this border is entirely worked, count 10



A BEAUTIFUL BORDER.

woven threads on the inner edge of material to this border, and draw the eleventh woven thread in length and width of the material. Then work evenly, over this strip of 10 threads, long stitches across its width. This done, divide these stitches into clusters, by working a stitch across the center of every cluster of 5 stitches. To make the fringe, draw the woven threads from the space of material which has been reserved for it. Then knot every 20 threads together.

A BEAUTIFUL BORDER.

This border is worked with linen thread on coarse linen. Draw on every fourth woven thread in the width and in the length of the material on which this border is to be worked. Then proceed to form the groundwork for the center space by drawing 36 threads. Work with feather stitch both strips of 6 threads on each edge of this center drawn space, in same manner as shown in illustration.

This center drawn space must first be divided into clusters of 24 woven threads each, by knotting the linen thread with which one is working around the

center of every cluster of 24 woven threads. This linen thread is marked 1 in the illustration. This done, take again the first cluster of 24, and divide it into 4 clusters, each of 6 woven threads, by knotting another linen thread, marked 2 in illustration, around every cluster of 6 woven threads, rather close along the edge of the strip worked with feather stitch.

Then draw the linen thread through the center of next cluster of 24; work the

cluster which follows in 4 trenches of 6 woven threads, then pass the linen thread through the center of next cluster of 24. Continue working so until the end.

Take another thread—marked 3 in illustration—and begin again at the first cluster of 24; divide into 2 clusters each of the 12 woven threads by knotting the linen thread around 12 woven threads at a time. This done, pass the linen thread through next cluster of 24; knot following cluster of 24 into 2 clusters of 12 woven threads, etc., to the end. Knot another linen thread—marked 4 in illustration—in same manner as thread 1, around the 24 woven threads of the first cluster of 24, between 1 and 3. Then pass the linen thread through the center of next cluster of 24. Knot it as before round next

together, then knot the following 6, then the next 6. The following knot is made around the last 3 woven threads and thread 2 together. Make a knot around thread 3, then around thread 4, then around thread 1, etc.

After this circle is worked, pass the linen thread through the center of next cluster of 24, and wind it around thread 1. Then begin to work the next wheel.

After the center drawn space is entirely worked, draw the three woven threads coming next to the 6 threads bordering the center space just worked. Leave next 6 woven threads, work these with feather stitch, as is seen; draw next 9 woven threads; work this drawn space in two rows of bars. These bars are to be worked with darning stitch around 9 woven threads; work this drawn space in two rows of bars. These bars are to be worked with darning stitch around 9 woven threads, alternating the bars of second row with the bars of first row.

Do not draw the following 6 woven threads. Work them with feather stitch; draw next 3 woven threads; leave next 6 woven threads; work them as before with feather stitch. Finish the edge of this border with button-hole stitches over the last 6 woven threads. Work in same manner opposite side of border.

EVA M. NILES.

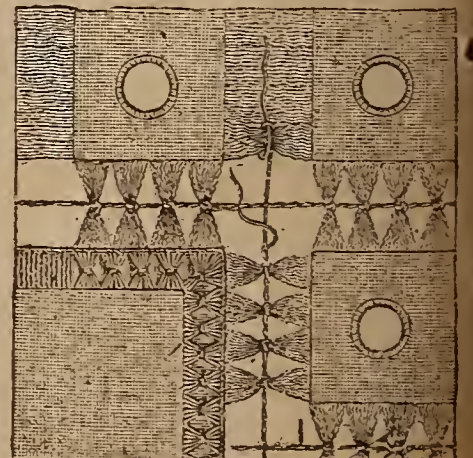
HOME TOPICS.

CORN AS FOOD.—A little book containing about one hundred and thirty different recipes for preparing corn for food, compiled by Mrs. Scott, of Nevada, Iowa, was handed to me a few days ago. Some of the recipes which are new to me, I will give to our household readers.

There is no doubt that if more corn bread, etc., were eaten during the fall and winter it would be better for our health. I knew a young lady who went to Kentucky, before the war, to teach. She had been troubled with dyspepsia for some time before this, but after a few weeks, diet of corn bread it all disappeared, and she came home at the end of the year in the best of health. Farmers who raise their own corn and take it to a little country mill to be ground, can have a superior quality of meal to that usually sold in cities, and yet I sometimes think that more corn bread is eaten in cities than in the country.

In the same way hominy is comparatively seldom seen on the table of the farmer.

HOMINY TURNOVER.—This is a recipe which was new to me, and which is an excellent, easily-prepared, breakfast dish. Take one pint of cold hominy, one teaspoonful of cream or rich milk, one teaspoonful of salt, one teaspoonful of sugar and two well-beaten eggs. Work all together until fully mixed. Turn this into a frying-pan in which has been melted a piece of butter about the size of a walnut. Stir the hominy until it is quite hot and



DETAILED WORK OF COVER.

then let it stand until it is a golden brown on the underside. Fold it over like an omelet and serve on a hot platter.

CROQUETTES OF MUSH.—Into one quart of well-cooked mush stir a piece of butter the size of an English walnut and set the mush where it will cool. When nearly cold stir into it two well-beaten eggs. When thoroughly mixed take a spoonful of the mixture on a well-floured board and form it into croquettes. As each is formed roll it to the edge of the board till all are done. Take them from the board with a griddle-spade, drop into smoking-hot lard and

try till a golden brown. Drain and serve on a folded napkin.

HOUSEKEEPING AND HOMEMAKING.—It would seem from the number of cooking recipes, which form the greater part of the woman's department in many newspapers, that eating was of the first importance. While it is important that the family be supplied liberally with well-cooked food, yet there are many other things to be considered by those who would be homemakers in its broadest, sweetest sense instead of mere housekeepers.

By the old way of keeping house, in many parts of the country, hard work from early morn until late at night was the rule. The sole idea seemed to be to make as much money as possible and to save every cent of it to add to the number of broad acres and the flocks and herds already possessed. A dollar spent in the adornment of the home or for recreation of any kind was so much money wasted. The consequence of all this was that often farmers and their wives were broken down in health at middle life, and the sons and daughters left the old home, of which their most vivid memories were of continuous hard work and much complaining of the hard lot of the farmer, and sought to make themselves homes in more congenial places.

Gradually this is changing. A new era of brighter lives and lengthened years is at hand. When the country home is made as attractive as it may be made, the tide of humanity which is now constantly setting cityward will be stayed, and the ambitious sons and daughters of farmers will be content to remain on the farm, where the most beautiful and attractive homes in the world can be made.

"SHE HAS TURNED OUT."—This is a very common expression in Virginia. It sounded a little odd to me when I first heard it said of a young miss of fifteen to whom my friend called my attention one day while I was visiting her.

"You do not mean that she is going into society, has left school and is supposed to be capable of becoming mistress of an establishment of her own?" I said.

"That is about what it means," my friend replied, "but if she were a girl of

miles, dancing until after midnight and then returning home. The almost inevitable result will be, she will be considered a 'maiden lady' before she has taken any real interest or pleasure in life. Then to escape that disgrace, as she has been taught to consider it, she will probably marry some one no better prepared to combat the stern realities of life than herself."

This "turning out", as they call it, so early in life, is to be deprecated above all things, and if I could reach every mother's ear in the country, I would say, beware. Give your daughters something to do that will give them real interest in the every-day cares of this busy world. Teach them that all honest work is honorable and to be respected, that idleness is sure to lead to evil and that a useful life is the only one worth living. MAIDA McL.

HOME-MADE VINEGAR.

It is something new for me to write for a newspaper; but after reading so many useful hints in your "little helper," I would like to tell some of the sister readers who are always out of vinegar how I have learned to make the best of vinegar with so little trouble and expense that any one can have it. After boiling sweet corn which you are preparing to dry, save the water and add a little sugar, about a pint of sugar to five gallons of the water. Stir every day, and in a short time you have as good vinegar as you get at the store, and you know what is in it.

MRS. ALICE H.

FANCY WORK.

Don't think, my dear readers, that I am going to write an article descriptive of some new and beautiful thing in fancy work. By no means; nor am I going to say anything to its disparagement. I consider that our homes are beautified to a very great extent by the work of our daughters and wives.

But the impression is fast taking hold on my mind that a good thing, as well as a bad one, may be carried to excess. There is nothing more fascinating than fancy work, and its very fascination will often lead us into overdoing, thus filling our homes with our production to that extent that our rooms look more like fancy-work display-rooms than living-rooms. Indeed, a very great amount is only for display.

How many of us have been made positively tired of fancy work on beholding our friends' parlors. Tidies or drapes on every chair, with four on the tete a tete; drapes, banners and bracket lambrequins on the walls; easels on the floor; sofa-pillows, foot-stools, rugs—in fact, everything that fair fingers can devise.

And how many of us, having any experience in the matter, can testify to the very unpleasant feeling caused by our carrying off, on our backs, our friends tidies, to the enjoyment

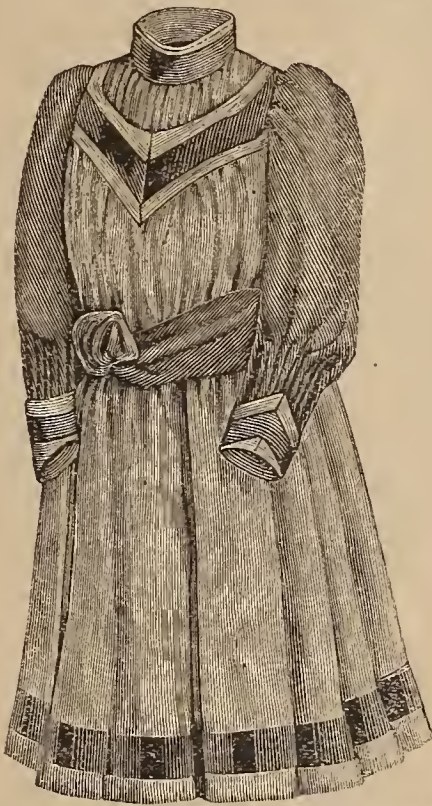
and such articles? Or, better still, control the desire to be always making something new, unless you are one of those generous girls who take delight in ornamenting the homes of your less-fortunate friends.

Above all things, *don't* neglect your literary taste for fancy work, as too many do. Cultivate a taste for good literature, if you never know how to do even the simplest fancy article.

ELZA RENAN.

GIRL'S DRESS.

The dress in our illustration, which is very suitable for a girl from nine to fifteen, can be made in any pretty woolen goods. The waist is slightly full into a low-necked, pointed yoke, and also into the belt. It is trimmed with black velvet



FRONT.



BACK.

ribbon to match the skirt; a soft sash passes around the waist, tied in a lover's knot in front. The collar and cuffs are trimmed with the velvet, also. The guimpe is always better to be of a contrasting color. For the sleeves, use a coat-sleeve pattern, cutting the outside goods a little larger, gathering the fulness into the arm-hole and plaiting the fulness at the wrist. Finish with a cuff turned up on the sleeve, trimmed with the velvet.

CHRISTIE IRVING.

"SIR LOIN."

It is generally supposed that the tender and toothsome joint called sirloin, received its name from Charles II. The merry monarch, it is said, knighted it at table one day in a playful mood, and entitled it "Sir Loin." But this pretty story is mere nonsense. The word should not be spelled sirloin at all, but surloin, and it meets the upper part of the loin, or the part of the joint above (sur) the loin. Some writers, Dean Swift among them, assert that it was James I. who ennobled the joint. This, however, is not likely to have been the case. At least, the frivolous act is just what we should expect of his frolicsome grandson.

ICE IN THE SICK-ROOM.

A saucerful of shaved ice, says the New York Medical Times, may be preserved for twenty-four hours with the thermometer in the room at 90° F., if the following precautions are observed: Put the saucer containing the ice in a soup-plate and cover it with another. Place the soup-plates thus arranged on a good, heavy pillow, and cover it with another pillow, pressing the pillows so that the plates are completely embedded in them. An old jack-plane set deep is a most excellent thing with which to shave ice. It should be turned bottom upward, and the ice shoved backward and forward over the cutter.

IT IS GOOD BUSINESS for every one having a cold to treat it promptly and properly until it is gotten rid of—intelligent experience fortunately presenting in Dr. Jayne's Expectorant a curative thoroughly adapted to cure speedily all Coughs and Colds and to allay any exciting inflammation of the Throat or Lungs.

A HANDFUL OF GLEANINGS.

Do you ever have any trouble in removing the tops of your Mason jars? Isn't there times when even the wrench fails to move them? Suppose you try inserting a thin-bladed knife between the rubber and the jar, all the way round; my word for it, the obstinate cover will move then.

Do you always make your jams and jellies when the fruit is in season, let the weather be hot or cool? Not necessary. Put the juice intended for jelly in jars, canning just as you do your fruit, and let it be until the cool days of fall or winter. Sugar is cheaper, and you will feel more like working than you do when the thermometer is near to boiling. The jelly will be just as good. The fruit intended

for jam may be canned without sweetening, and when you want to make your jam in winter, proceed just as you would in the summer; you'll be more comfortable and the jam will be in no way inferior to the summer-made article.

Do you always pour boiling water over your peaches when you want to remove the skin, or do you peel them with a knife? Wasteful! The first is a much nicer way; the skin slips off as easily as it does off of tomatoes, if peaches are ripe.

Oh, yes, and do you always pour boiling water over fish to remove the scales? Better way than scraping with a knife, I assure you.

Do you use kerosene to clean your zinc? A very effectual cleaner; good for tin, too.

ELZA RENAN.

HOW DO YOU LACE YOUR BOOTS?

Not one person in a thousand laces his shoes correctly. About the nearest anybody gets to it is to lace as tightly as possible. The correct way is to put your foot, when you are about to lace your shoe, as much as possible in the heel of the shoe. You can do this best by lacing your shoes with the heel of your shoe resting on a chair standing in front of the one you are seated in. Over the instep the lacing should be drawn as tightly as possible. This will hold your foot back in the shoe, giving the toes freedom and preventing their being cramped. Lace about the ankle to suit your comfort.—Vanity Fair.

QUERY ANSWERED.

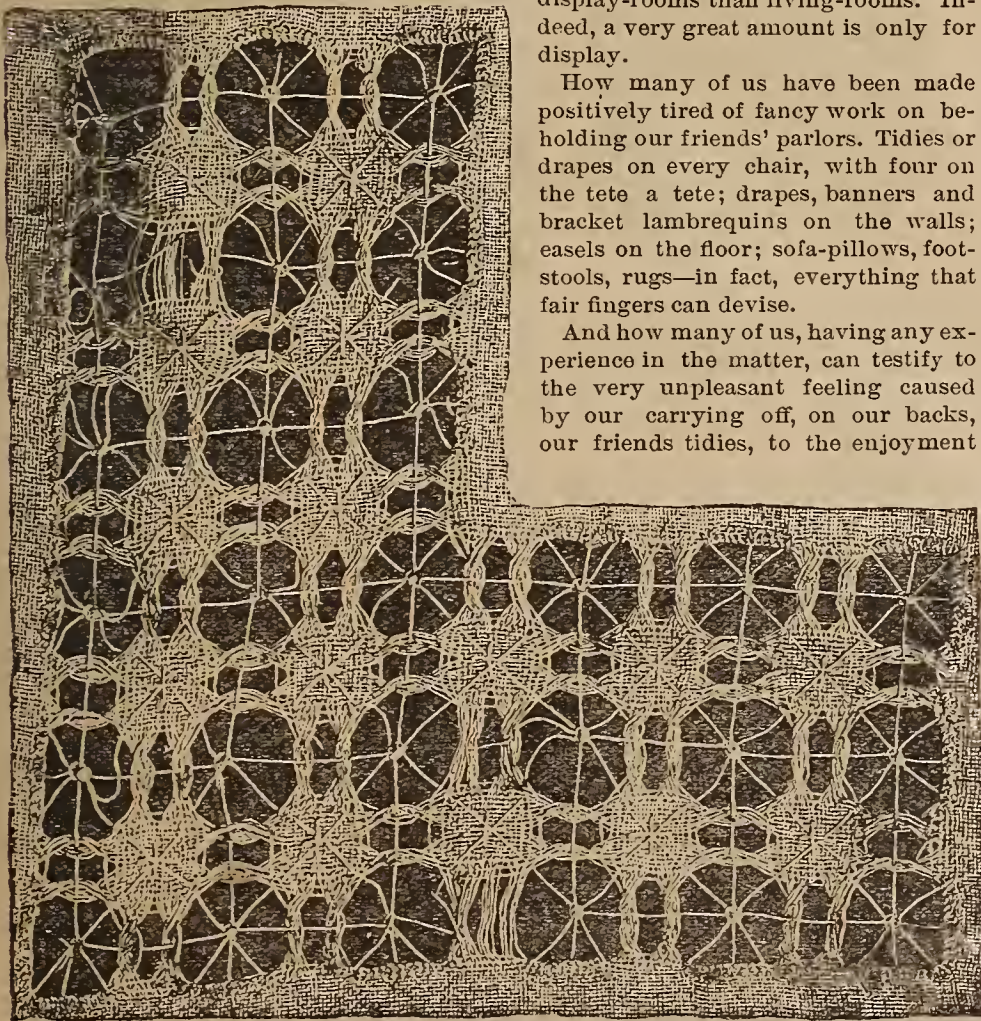
S. X., Roca, Nebraska. The aprons you speak of are first stamped and then the design gone over with a kind of indelible ink which comes for the purpose, called "etching ink." It is seventy cents a bottle, but will do a great number of articles. It is used with a pen and fancy letters on napkins. Table linen and pillow-cases look very beautiful done with it.

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mine, I should keep her in short dresses until she has her growth at least, and in school until her mind is more mature. For my part, I cannot see what mothers are thinking about when they permit their daughters of that age to receive the calls of gentlemen at their homes and to be accompanied by them to places of amusement. For two years, at least, Mamie Weston has been attending parties with young men, sometimes going five or six

of said friends. And, on turning around, how often has your dress caught and overturned frail easels made of "cat-tails" from the marshes!

Of course, when there are two or more daughters in the family, and each one a fancy worker, it is natural that each should like to exercise her own taste. But rather than have such a profusion of fancy articles, would it not be better to "cast lots" as to which shall make such

Our Sunday Afternoon.

BROADCAST THY SEED.

BROADCAST thy seed!
Although some portion may be found
To fall on uncongenial ground,
Where sand, or shard, or stone may stay
Its coming into light of day;
Or when it comes, some pestilent air
May make it droop and wither there—
Be not discouraged; some will find
Congenial soil and gentle wind,
Refreshing dew and ripening shower,
To bring it into beauteous flower,
From flower to fruit to glad thine eyes
And fill thy soul with sweet surprise.

—London Christian.

TRUST GOD FOR SMALL THINGS.

WE are too much like children who cry and make a great ado about sweetmeats and toys, while they can trust for clothing, general care and a house in which to live. How many of what may be called the small things of this life and of religion we are anxious about, while the great concerns we leave with God! Now, why can we not commit ourselves into his hands for the small as well as the great? Let us not forget that he rules the atom as well as the world, that he feeds the humming-bird as well as the eagle, that he provides the crust as well as the feast, that he numbers the hairs of your head as well as the stars of the firmament. Shall he uphold all things and not uphold you? Shall he clothe lilies and feed ravens, and not clothe and feed you. O ye of little faith! As a Christian, God has made over to you a crown that fadeth not away; and can you not trust him for a crumb which perishes? Has he clothed you with the garment of salvation, and will you not trust him for the clothing of the body? Has he provided a house for you in the heavens, which hath foundations, whose builder and maker is God; and will you not trust him for a tabernacle, or a cottage in the wilderness? Has he not given you himself, his Son, his Spirit, his word, his grace, his promises, and can you not trust him to give you bread, friends, clothes, habitation, and all the necessities of this life? Surely, if he has given you the greater, he will give you the less. This is the very argument of St. Paul: "He that spared not his own Son, but delivered him up for us all, how shall he not with him also freely give us all things?"

SAM JONES.

"Sam Jones, I see, is getting \$50 a day for preaching," remarked a Methodist, "and the cynical newspapers are making much of the fact. I don't know as I blame them for criticising. It is a natural feeling to distrust a minister who goes about preaching for so much per sermon, just like a public lecturer who speaks for so much per lecture. It may be all right, but it looks bad to the public and is certain to create adverse comment. Of course, a preacher has to be supported. We support our ministers comfortably, and nobody finds fault with that. But when a man makes a business proposition, that for so much money he will come and get up a religious revival among us, I can't help feeling suspicious and slightly antagonistic. Sam Jones is a smart man, and his methods are like those of some other revivalists, but I can't help thinking he lays himself liable to serious criticism."—Louisville Post.

"THE SAME OLD JIM."

The ultimate evidence of value in a religion must be its fruits, or the effects which it produces on the temper and conduct of its adherents. Religion has its seat in the heart. No amount of outside manipulation can make a man a real Christian. Forms of faith, attention to rites and ceremonies, are no sure evidences of a good man. Some of the worst men have served the devil under the guise of devotion to God. Pharisees and Jesuits are for their long prayers and sanctifications; the devilry still works

under their professional robes, and is sure, in due time, to burst to the surface in a fiery flood.

The Canadian Indian, in his blunt way, hit the nail on the head when, in disputing the Jesuit's doctrine of the efficacy of baptism, he said, "Not the face; the heart needs washing. Water on face all go for nothing to bad man. Jim Buck Tree bad as ever with strong water. Baptize on face do him no good; he the same old Jim still!" The aim of Christianity is to dispose of this old Jim. No holy water sprinkled on him will do the work; the old man must be cast from the heart, and the new man renewed in the image of Christ introduced. Christianity is eminently a heart-work. To be sure, heart religion will manifest itself in external conduct; but it must be first in the heart. The heart is the matter of first importance.

—Zion's Herald.

CHRISTIAN LUKEWARMNESS.

The temptation when away from home to neglect the study of God's word is common. Many Christians, it is to be feared, forget to carry their Bibles with them, and not a few, in the excitement of novel surroundings and pursuits, scarcely read the word at all. Others read to satisfy their consciences, and the psalm or chapter is like a dose of medicine which must be disposed of. Undoubtedly, they feel the better for the act, but it is not because they have found sweetness in meditation on divine truth, but because they felt free to give themselves to the things in which they are really interested. It might be well for many professed Christians to ask themselves why they read the Bible.

BENEVOLENCE.

A Russian soldier, one very cold night, kept duty between one sentry-box and another. A poor workingman, moved with pity, took off his coat and lent it to the soldier to keep him warm; adding, that he should soon reach home, while the soldier would be exposed out of doors for the night. The cold was so intense that the soldier was found dead in the morning. Some time afterward the poor man was laid on his death-bed, and in a dream saw Jesus appear to him. "You have got my coat on," said he to the Savior. "Yes, it is the coat you lent me that cold night when I was on duty and you passed by. I was naked and you clothed me."

"LET THE BABY CRY."

In the old mining days, a child was so rare in San Francisco that once in a theatre, where a woman had taken her infant, when it began to cry, just as the orchestra began to play, a man in the pit cried out, "Stop those fiddles and let the baby cry. I haven't heard such a sound in ten years." The audience applauded this sentiment, the orchestra stopped and the baby continued its performance amid unbounded enthusiasm.

WHY ARE YOU NOT A CHRISTIAN?

Is it because you are afraid of ridicule, and of what others may say of you?

"Whosoever shall be ashamed of me and of my words of him shall the son of man be ashamed."

Is it because of the inconsistencies of professing Christians?

"Every one of us shall give an account of himself to God."

Is it because you are not willing to give all to Christ?

"What shall it profit a man, if he shall gain the whole world and lose his own soul?"

Is it because you are afraid that you will not be accepted?

"Him that cometh to me I will in no wise cast out."

Is it because you are too great a sinner?

"The blood of Jesus Christ cleanseth from all sin."

Is it because you are afraid you will not "hold out?"

"He which hath begun a good work in you will perform it until the day of Jesus Christ."

Is it because you are thinking that you will do as well as you can, and that God ought to be satisfied with that?

"Whosoever shall keep the whole law, and yet offend in one point, he is guilty of all."

Is it because you are postponing the matter, without any definite reason?

"Boast not thyself of to-morrow, for thou knowest not what a day may bring forth."—Friendly Greetings.



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An agency business where talking is unnecessary. Here are portraits of Miss Anna Page of Austin, Texas, and Mr. Jno. Bonn of Toledo, Ohio. The lady writes: "I do business at almost every house I visit. Every one wants your grand photograph album, and were I deaf and dumb I could secure orders rapidly." The man writes: "Your magnificent album is the greatest of all bargains, the people generally are wonder-struck and order at sight. The orders taken last week pay me a profit of over \$100. This is the chance you have been looking for. You can make from \$5 to \$25 and upwards every day of your life. Talk not necessary. You can make big money even though you don't say a word. Our new style album is the grandest success ever known, and the greatest bargain in the world. Double size—the largest made. Bound in richest, most elegant and artistic manner, in finest silk velvet plush. Bindings splendidly ornamented. Inside charmingly decorated with most beautiful flowers. It is a regular \$10 album, but it is sold to the people for only \$2. How can we do it? It is the greatest bit of the time we are manufacturing \$500,000, and are satisfied with a profit of a few cents on each. Agents wanted! Any one can become a successful agent. Extra liberal terms to agents. We publish a great variety of Bibles and testaments; also subscription books and periodicals. Agents wanted for all. Our agents are always successful. We do the largest business with agents in America, and can give larger value for the money and better terms than any other firm. Particulars and terms for all of above mailed free. Write at once and see for yourself. Address H. HALLETT & CO., Box 561, PORTLAND, MAINE.

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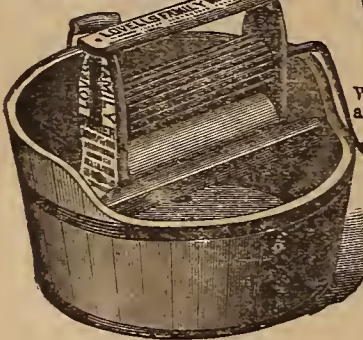
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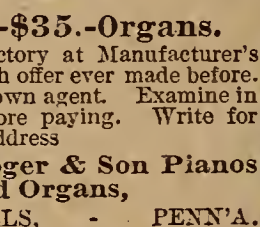
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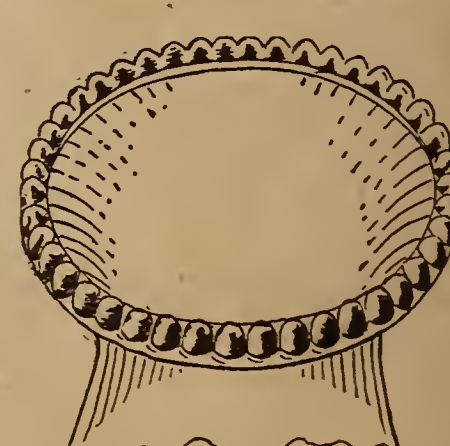


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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Waverly Magazine.—L. I., Jamestown, Ont., Canada. The *Waverly Magazine* is published at Boston, Massachusetts.

Rock Breakers.—C. E. B., Bedford, Ky. Rock breakers are made by the Farrel Foundry & Machine Co., Ansonia, Conn.

Vegetable Seeds.—Mrs. J. N. D., Rockton, Ill., asks if the seeds of beets, salsify, carrots, etc., grown from this year's sowing will be good for sowing next year. Certainly, if perfectly matured.

Tomato Rot.—E. B., Cataract, Wis., asks what will stop tomatoes rotting. We know of no remedy. The tomato rot is a fungus disease; as a preventive, plant your tomatoes as far away as you can from the ground they grew on the preceding year. Give plenty of space and good cultivation.

Preserving Meat.—B. W. F., New Boston, Texas: Farmers usually do their butchering before mid-winter, and put down the meat in brine for six weeks. It is then taken out, drained, and the flesh side is thoroughly rubbed with finely-pulverized black pepper. It is then hung up and smoked. Some throw an occasional handful of tobacco leaves on the fire while smoking their meat, and claim that it will prevent flies from touching it. If you have a good smoke-house, dark, dry and cool, you can leave the meat hanging there without danger from insects. A safer way is to wrap the hams and shoulders, after they are smoked, in paper, put them in paper flour-sacks and then hang up.

Carbonate of Lime.—Z. H. P., Hudgins, Va., asks: "What is the value of carbonate of lime per pound in Orchilla guano which analyzes as follows: Phosphoric acid, 15 to 21 per cent; bone phosphate of lime, 35 to 45 per cent; alkaline salts, 5 to 6 per cent; carbonate of lime, 20 to 30 per cent?"

REPLY BY JOSEPH:—Carbonate of lime, or in other words, common chalk, has no commercial rating, and probably is not worth the freight. The whole analysis, as given, makes the impression upon me as if gotten up for the purpose to mislead. Who cares for the carbonate of lime? The alkaline salts may be kainit; and 5 to 6 per cent alkaline salts, in this form, would be equivalent to less than 1 per cent potash. Why not quote the percentage of potash instead of alkaline salts? This leaves little of value except the 15 to 21 per cent of phosphoric acid in the form of bone phosphate of lime, but it gives us no idea how much of this is available, and worth 7 or 8 cents a pound, and how much insoluble at 2 to 4 cents per pound. Altogether, I do not like this style of analysis, nor a low-grade, incomplete fertilizer of the kind like "Orchilla guano."

Sorghum Mills.—Chester Whites.—W. H. Emerick, Neb., writes: "Where can I get sorghum mills?—Where did the Chester White hog originate?"

REPLY:—You can get good sorghum mills of the Blymyer Iron Works, Cincinnati, Ohio. In reply to your second question we quote the following from Coburn's Swine Husbandry: "The Chester County White hog is a native of Chester county, Pennsylvania, where the breed originated. The first impulse to the improvement of swine in this country was induced by the introduction of a pair of very fine, white pigs, brought from Bedfordshire, England, by Captain James Jeffries, of this county, and put upon his farm on the Brandywine creek, near West Chester, the county-seat, in the year 1818. Some of our more enterprising farmers, seeing these finely-bred pigs, were induced to commence an improvement of their swine by a cross of these, their progeny, and others of the best hogs of the county, and by continuing a careful selection and judicious crossing for many years, have produced the Chester White of to-day, a most desirable, easily-fattened, and perhaps the best bacon hog for the general farmer in this or any other country."

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Bruise.—F. P., Pella, Iowa. The swelling or "lump" you complain of undoubtedly owes its origin to a bruise, and when it commenced to increase in size, the animal very likely rubbed that place and thus bruised it again. Its removal will require a surgical operation.

Curb and Splints.—M. W., Bloomington, Pa. As to the curb, relieve the horse from hard work, especially hard pulling on hilly ground; don't ride him horseback, give him an abundance of good, nutritious food, and rub in about twice a week a little of an ointment composed of: Biniodide of mercury, half a drachm, and hog's lard, one ounce. As to splints, I refer you to an answer given in a recent issue of this paper.

Swine-Plague.—J. C. E., Springfield, Tenn., writes: "Please tell me the cause and remedy for thumps in hogs. I have lost two hogs and have one now sick. They seem to breathe with great difficulty, lose their appetite, even refuse water."

ANSWER:—What you call "thumps" is swine-plague, or, as the farmers call it, hog-cholera. I therefore refer you to what has been said in regard to that disease in recent numbers of this paper.

Diabetes.—C. W. F., Rexburg, Idaho. Your mare suffers from diabetes, but as you say only that she urinates often—every ten to fifteen minutes—and that the urine is of a whitish or milky appearance, it is impossible to decide, from your description, what kind of diabetes your animal is affected with. This decision, at any rate, requires an exam-

ination. I therefore can only advise you to see to it that the mare receives nothing but sound food, and that the oats, in particular, are perfectly free from any mustiness.

Contracted Heels.—S. R. M., Statesville, N. C., writes: "I have a six-year-old mare that is lame in the left fore foot, which is less than the other. I think it is what we call narrow heel. She seems worse when shod."

ANSWER:—Take her shoes off and let her run out to pasture for a year. Or if you don't want to do that, have her shod by a blacksmith who is familiar with Defay's method of widening contracted heels, and have that applied. If, however, there is also navicular disease, the case is a hopeless one.

Lampass.—Sorocco, N. M. "Lampass" is only an imaginary disease. In young horses, and in older horses kept on grass feed, or in a pasture, the germs are always more succulent. In young horses they sometimes swell at the time the animal is shedding the molars, but such a swelling, of course, is only temporary, and don't require any treatment. The only case requiring any treatment is if the gums show swelling on account of a digestive disorder, but then it is the latter that needs treatment, and most assuredly not the gums, because the swelling in such a case, is only symptomatic. To burn or cut lampass is barbarism.

Arthritis.—M. H. B., La Rue, Ohio, writes: "My spring colt has something the matter with both hind legs at the stifle joints. The joints seem weak. It is sometimes difficult for the colt to get up. A soft, squishy lump has formed on front of each joint. The joints crack as the colt moves about."

ANSWER:—Take equal parts of tincture of iodine and tincture of cautharides, and apply this mixture once a day on the sides of the affected joints. But when rubbing it in, either use a rubber glove or cover your hand with a piece of hog's bladder; otherwise, your hand will be temporarily stained brown by the tincture of iodine.

Capped Elbow.—H. DeB., Newburgh, N. Y., writes: "Please tell how a shoe-boil can be removed without injuring the limb of the horse."

ANSWER:—By employing a competent veterinary surgeon to do it. Still, the removal of a capped elbow, or, as you call it, a shoe-boil, counts for naught, unless the causes are removed, which is not always possible, especially if the same consists in diseased lungs, which cause the animal to rest on the elbows in order to breathe easier. If the horse rests on the elbow because he is jaded or fatigued out, the remedy suggests itself. A level floor, good and sufficient bedding, and shoes without calks are also essential. A sure way to prevent them is to keep the animal standing.

Light Mane.—J. C. M. R., McMinnville, Tenn., writes: "My seven-year-old horse has but very little mane. Is there any remedy that will make it grow? He also has a habit of rubbing his mane and tail. I think there must be some humor in the blood. He seems to shed his hair but little at a time, although he is fat."

ANSWER:—I advise you, in the first place, to have your horse well groomed; to keep the chickens out of the stable, and to wash his mane and tail thoroughly with soap and warm water, and this done, with a two-per-cent solution of carbolic acid. There is no humor in the blood; it is dirt, and, perhaps, some parasites—horse-lice or chicken-lice, etc.—on the skin.

Lolling Tongue.—J. R. P., Sutton, Neb. What you complain of is, in most cases, only a bad habit, acquired because an unsuitable bit, which either pressed too much upon the jaws (had too much curve), or rested almost entirely upon the tongue (was too flat), has been used. In the first case, the animal acquired the habit of stretching out the tongue by an endeavor to ease the jaws, and in the second case by endeavoring to shift the pressure upon the tongue from one place to another—upon a thicker portion. If the habit is not yet a confirmed one, another more suitable bit may be tried, but if the habit is of long standing, no cure can be effected. In some cases, the stretching out of the tongue is due to partial paralysis, which is incurable.

Partial Paralysis.—R. D. L., Vanderbilt, Mich. The disease is partial paralysis, but it is impossible to decide, without an examination, whether it is caused by an affection of the spinal cord, by an injury to the backbone, or by a morbid process in the muscles; hence, it is difficult to prescribe a suitable treatment. If there is, as you say, no veterinarian whom you can consult, my advice is to keep the cow in a place in which she cannot injure herself; to bestow good care upon her, and to apply a good counter-irritant on the back above the kidneys. As such, you may use oil of cautharide, which is prepared by heating one part of cantharides and four parts of olive oil for one hour in a water bath, and then strain it. The application may be repeated in about three or four days. The milk is not necessarily unfit for use.

Splints.—I. M. J., Lewis, Kansas. Splints, unless high up, close to the knee joints, do not cause any lameness, and a young colt, as a rule, will outgrow them; that is, the splints gradually become more solid, or contract, and thus grow smaller, while the animal grows larger. It may be that the animal is somewhat bow-legged, and that thus an unproportionate amount of weight is thrown upon the inner splint bone. If such is the case, it will be of advantage either to raise the outside of the hoof by means of slipper-shoes, or to lower the inside by judicious paring. In a colt, of course, the latter is preferable. If it is intended to do more, gentle but uniform pressure upon the splints, kept in position by bandages, or applications of mercurial ointment, of which a trifle may be rubbed in once every other day, have been recommended by a great many practitioners.

Nasal Discharges.—J. D., Axtell, Kansas, writes: "I have a three-year-old cow that seemed to be sick two months ago. She ran at the nose something like a horse with distemper. She still runs at the nose a very little, but when she chews her cud a part of the food returns through the nose, and she coughs occasionally."

ANSWER:—Discharges (running) from the nose may be caused by several morbid conditions, not only in the respiratory passages and in the lungs, but also in the accessory cavities or sinuses. That "a part of the food returns through the nose," when she rummates, indicates the existence of some morbid condition in or near the pharyngeal cavity, or on the soft palate. As these parts are accessible to manual examination, I advise you to have them examined by a competent person to ascertain the nature of the morbid changes.

Swine-Plague.—D. M. A., Plainfield City. Your pigs are affected with swine-plague, the disease called by the farmers "hog-cholera." I know that Dr. D. E. Salmon recently applied the

name "swine-plague" to some ailment which he claims is a different disease. Whether the disease he calls swine-plague exists in reality, or only in his imagination, I will not here discuss, but, at any rate, he has no right to apply that term to any other disease than what the farmers call hog-cholera, because I introduced that name and applied it to the last-named disease in my official report to the commissioner of agriculture as early as 1878, and besides that, the disease is and has been known in Germany since 1846 by the name of schweine-seuche, of which swine-plague is a literal translation. Therefore, neither he nor anybody else has a right to create confusion by applying it to any other disease.

Tuberculosis, Probably.—T. B., Altoona, Pa. It looks very much as if you have tuberculosis among your cattle. There is no danger for your mare, but there is danger for your family who use the milk, provided my diagnosis is correct. I therefore would advise you to have the animal examined by a competent veterinarian, or if none is available, by your family physician. If he, the veterinarian or the physician, comes to the same conclusion, I would advise you to kill the animal, so as to be able to verify the diagnosis. The meat of a tuberculous animal is dangerous, and therefore not fit for human food. Tuberculosis, being caused by a microscopic vegetable parasite, the bacillus of tuberculosis, is infectious, and can be communicated from animal to human beings as well as from one animal to another. Horses, however, have but very little predisposition, and, therefore, are in no particular danger.

A Tumor.—W. B. K., Hebron, Neb., writes: "My three-year-old Jersey bull has a swelling in the flesh of one hind leg, one foot above the gambrel joint. It is the size of a three-quarter wash-basin, and has been growing for nine months. He is not lame and I can discover no soreness. It seems hard, all over, alike. Will it interfere with his fertility?"

ANSWER:—As the swelling is slowly growing, is uniformly hard, and not sore or painful, I have to conclude that it is not an inflammatory swelling, and that it will not develop into an abscess, but that it is some morbid, new formation, a tumor. What kind of a tumor it is, of course, can be ascertained only by an examination. I do not see any reason why it should affect his "fertility." If you wish to have the swelling or tumor removed, a surgical operation will be necessary. To make external application is not advisable, because they will only hasten its growth and may cause it to become malignant.

Spanish Itch.—R. K., Newman, Texas, writes: "I have a mare that has a skin disease called 'Spanish Itch.' She took the disease about three years ago. It commenced with little pimples, that would gradually spread, having a scaly appearance, and sometimes getting raw at the center of the eruption. It caused her to shed off her mane, tail and all her hair. But she never scratched like it was an itch."

ANSWER:—I am not familiar with the disease you call "Spanish Itch." Still, I think it will be safe to advise you to wash the animal first with soap and warm water, and then with a two-per-cent solution of carbolic acid. This treatment should be repeated at least once, and it may be necessary to repeat it twice after an interval of five days. That the stable, etc., meanwhile must undergo a thorough cleaning may not need any mentioning. If you desire further information, apply to Dr. M. Francis, professor in the Agricultural and Mechanical College of Texas, College Station, Brazos county, who has made an investigation of that disease.

Pitchforked—A Sick Calf.—F. C., Moline, Ill., writes: "What could I do for a valuable boar which was injured by a line of a pitchfork penetrating the left side of his body, midway between his fore and hind legs, and about four inches down from the top of his back. His hind legs were both useless at first, but he walks around all right now, with the exception of the left hind leg, which is slightly weak. His sheath is swollen as large as a goose-egg, and the water runs away in a steady stream or sometimes by drops. Will he be fit to breed from?—What shall I do for a month's old calf which I think has a cold in the head? The symptoms are wheezy breathing and almost entire loss of voice."

ANSWER:—The pitchfork undoubtedly injured the spinal column, and, may be, the spinal cord itself. I don't think that at present anything can be done. If the wound has healed without any suppuration, time may effect some improvement. But if pus has been formed, or an abscess has been produced, a turn for the worse may be expected. Whether or not the animal is fit for breeding purposes will depend upon his ability to serve.—As to your calf, a treatment will hardly pay. If the same is in good condition, it will probably be best to butcher it.

Malignant Oedema.—P. S. T., Eskridge, Kan., writes: "In this vicinity several calves from one to two months old—all running with the cows on pasture—have died under the following conditions: In the morning the calves would suck, and, to all appearance, were well. In an hour or two afterwards they would bellow as if in severe pain, running in a narrow circle until they would fall to the ground, when they would struggle in extreme suffering. Again they would stagger to their feet, follow a circle until they fell, always falling on the same side, and if turned over, would struggle to again get on the left side. In about an hour from the time they were first seen, they would die."

ANSWER:—The disease is malignant oedema, symptomatic anthrax, or, as the farmers call it, black leg. The cause is a microscopic unicellular vegetable germ, which is known as the bacillus of malignant oedema. The prevention consists in a change of locality; that is, in taking the animals to a place, another pasture, which is not infected, and, if possible, in a disinfection of the infected place. To protect the animals, it will be best to take them to high and dry ground, and to water them from a good well. A treatment, for obvious reasons, is very seldom of any use.

Probably Periodical Ophthalmia.—D. K., Pulaski, Ky., writes: "I bought a mare a short time ago. After I had her a few days I noticed her eyes had a sleepy look, and finally a white film gathered on one, but is now gone, but her eyes seem weak. The eyes do not water or matter, and the one, while in its worst, seemed to be sunken some, but is now full again."

ANSWER:—I suppose you have been taken in, and bought an animal affected with periodical ophthalmia, a disease which, almost invariably, leads to blindness. Regular diet and moderate but never excessive exercise may tend to postpone the time at which the eyesight will be lost. Quackery, of course, will shorten it. If another attack makes its appearance, the following mixture, applied two or three times a day, with a small glass

pipette capped with a rubber bulb, will assist in shortening the same and prevent the closing of the pupil, but it will not prevent future attacks or final blindness. Take finely triturated calomel and extract of belladonna, of each half a drachm, water a few drops, and pure olive oil one ounce. If the calomel is finely triturated, the belladonna extract fresh, and the ingredients, as above given, are slowly and gradually mixed in a mortar in the order given, the whole will make a nice emulsion. Still, before each application, a little shaking up will do no harm, because the calomel, being very heavy, has a tendency to settle to the bottom.

A Split Hoof.—P. J. B., Charlottesville, Ind., writes: "My horse has a split hoof. I first noticed a small hole at the top of the hoof in the middle. It looked something like a nail hole. Now there are three such looking places, and the hoof is split almost to the bottom. When the horse steps, it gaps open slightly. It also lames the horse a little. The hoof is split exactly in the middle on the fore foot."

ANSWER:—As you describe the case, the split, it seems, is more serious than a common sand-crack. There seems to be loss of substance, and if that is the case, the operation and the treatment necessary will require a skillful veterinarian. In the first place, above where the split commences, a cross cut must be made; then, the split must be thoroughly cleaned and disinfected. This done, it ought to be filled with Prof. Defay's artificial horn, composed of gutta-percha, three parts, and gummi ammoniac, two parts, melted together. After it has thus been filled, a skillful blacksmith, in order to prevent a new separation, must rivet the horn on both sides of the split together with a thin horse-shoe nail, and this done, the horse should be shod in such a way that the split part of the hoof does not touch the shoe. You see that this rather complicated operation, thus briefly described, will require skillful hands to execute it; but well executed, a healing, very likely, will be effected, while, if a bungling job is made, success is out of the question.

Skin Disease.—R. B., Buelan, Col., writes: "I have a nine-year-old horse affected with some kind of skin disease. About two years ago I first noticed that during summer he would sometimes be covered with small lumps. This summer he got scaly or scurfy and rubs himself every chance he gets."

C. B., Bethany, Oregon, writes: "Last February I noticed that my mare was scratching herself on corners of the barn and fences, also in and over brush in the pasture. I hunted for lice, but could not find any. Then I thought it must be some humor of the blood, especially because I noticed some little swellings here and there on her skin, like from mosquito bites, and afterwards the hair being rubbed off on these places."

ANSWER:—Prepare a two-per-cent solution of carbolic acid (Mallinkrodt's best) and then on a warm day take your mare outdoors, and after you have thoroughly curried and brushed her all over, apply your carbolic acid solution most thoroughly by means of a good brush, and then wash her all over. Meanwhile, while the mare is outdoors, clean her stall, or still better, the whole stable, most thoroughly, and white-wash the woodwork. Repeat the same treatment after five days, and perhaps a second time after another five days, and I feel confident your mare will be cured. But you will never succeed unless you most thoroughly clean and disinfect your stable each time the mare is washed. Harness, halter, blankets, currycomb, brush, etc., also must be thoroughly cleaned and disinfected.

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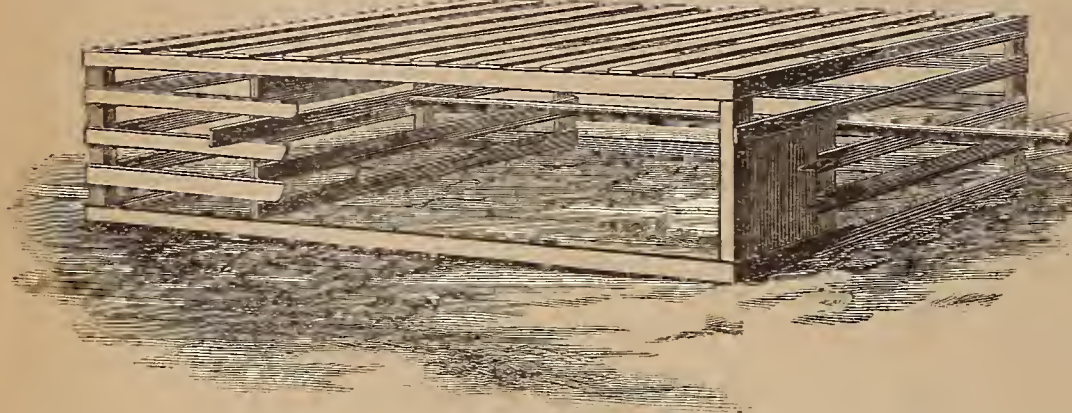
Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammoncton, New Jersey.

A CONTRIVANCE FOR CATCHING FOWLS.

Every person who has had experience in trying to catch fowls in coops knows how disagreeable it is, especially if some particular fowl is required. Mr. J. F. Arnold, Texas, who has experienced such difficulty, sends us a design of a method used by him, and which works well. The coop is two feet high, four feet wide and eight feet long. It has a sliding end, shown in the cut, by means of which the fowls are drawn to the door and easily caught. The pole running through the coop, by which the sliding end is drawn forward or



A CONTRIVANCE FOR CATCHING FOWLS.

pushed back, also answers for a perch when the birds are confined over night in the coop. In the illustration the slats are omitted on the side, that the interior may be seen.

PIGEONS AS NUISANCES.

The pigeon-house soon becomes overrun with lice, and it is safe to say, that, so far as the common pigeons are concerned, their houses are never cleaned. If the pigeons are kept in covered yards they can injure nothing outside of their pens, but if they are permitted to fly over the whole neighborhood they carry lice with them and stock the yards of the neighbors with the vermin. One pair of pigeons, left by their owner, to pick up grain in neighbors' yards, can do more harm in one day than can be undone with hard work in a week at getting rid of lice. Pigeons coming from yards infested with cholera can carry it with them, and they are intolerable nuisances to poultrymen, as a pair of pigeons, feeding their young, will consume an enormous amount of feed in a day. They also make the barn roofs filthy, and, so far as value is concerned, do not pay for one tenth the damage they inflict.

In condemning the pigeon, we make no allusion to persons who keep pigeons on their own grounds, and who have covered yards, pretty cotes, and take pleasure in them, but we do denounce the pigeon owners who keep flocks that receive no attention, and which annoy neighbors and inflict damage.

CHICKS AND FOWLS.

To feed half-grown chicks with old fowls means that the fowls will become overfat and the chicks will not grow, owing to the tyranny of the larger birds. Young males will not be allowed to eat at the trough if the old male can prevent them, and the hens will pick at every chick that comes in the way. As the young birds must be forced now, they should be fed separately from the older ones, and given all they can consume.

LARGE FOWLS FOR MARKET.

The markets do not demand a very large fowl at any season. A bird weighing about four or five pounds is more salable than one weighing eight or ten pounds. The fowl that brings the best price is the fat, plump, fresh-looking one, especially if dressed, dry picked and clean. Live fowls should never be shipped, as they are affected by the cold of winter and heat of summer, as well as from lack of water and attention on the journey.

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FEEDING SHELLS FOR LIME.

As the hens will not eat oyster shells when ground as fine as meal, and prefer the large, coarse pieces, it is doubtful if oyster shells assist in supplying lime for the egg shells, and are rather eaten because of being sharp and assisting to grind their food in the gizzard. Oyster shells are as insoluble as limestone, or any other carbonate of lime, and cannot therefore be utilized as food. If lime is to be given to fowls it can best be done in the drinking water, as the freshly-burned lime (hydrate, when slaked) is in the best form for the purpose. The lime of the egg shell can be secured from the food very easily if the hens are supplied with plenty of grass and a variety of food. The grains are deficient in lime, and when

Moulting Canaries.—Mrs. J. L. K., Morgantown, W. Va., writes: "Will some one please tell me what ails my canaries. They have been moulting for over a year and do not sing. What should I give them?"

REPLY:—When birds are fed too much oily food they will moult more frequently than if the food is of a variety. If they are moulting slowly, and do not feather within the proper time, feed a little coarsely-ground bone, with a small proportion of lean beef, cooked and chopped very fine.

Space in Houses and Yards—Best Breeds.—F. J. K., Davenport, Iowa, writes: "(1) How many hens can be successfully kept on an enclosed lot 72x144 feet. (2) Is 8½ feet a sufficient height for enclosure? (3) Would it be advisable to divide this space, and use each half alternately?—What kind of hens would you recommend as being the best all around?"

REPLY:—(1) It will accommodate 50 fowls well. (2) Yes. (3) It is better to divide it into 4 lots, each 36x72, and the flock into two lots of 25 fowls each, using the lots alternately. For your section the Brahmas, Cochins, Wyandottes or Plymouth Rocks should answer your purpose. There is but little preference to be given any one of them.

Poultry Raising With Other Things—Free Range or Close Quarters—Continuous Apartments.—"Subscriber," writes: "Can poultry raising be combined with gardening, bee keeping or dairying, either with one or more of them?—In poultry raising for profit is it best to allow the fowls free range, or to confine them in yards, supposing one so situated as to be able to do either?—In keeping a large number of fowls, may the building in which to house them be of one continuous length, cut off into requisite compartments by partitions, or should each flock of a specific number have a separate and disconnected house and yard?"

REPLY:—It can be combined with one or all, under proper conditions, but can be conducted best with bee keeping. The free-range system entails less labor but requires more ground. It is better than confinement of the fowls. A number of fowls may be divided into flocks, in one continuous building.

PAPERING THE POULTRY-HOUSE.

Paper should never be used in a poultry-house that is liable to become infested with lice, as it affords an excellent harboring place for the pests. When winter comes, first thoroughly clean the premises, and then tack the paper close to the walls, in a manner to render it easily removable when the winter is over. Use all precaution against lice, as they entail more work than can sometimes be bestowed.

BANKING AROUND THE POULTRY-HOUSE.

Do not bank the earth up to the poultry-house until the ground begins to freeze, as the boards do not rot at that season of the year. As soon as the winter is over, level the earth again, as the boards will begin to rot in spring. They usually begin to decay on the level of the ground. The portions above ground, and those below, will last much longer than the parts of the boards that come in contact with the surface.

THE USE OF LINSEED MEAL.

Linseed meal is highly nitrogenous, but contains a large proportion of the carbonaceous elements also, and for that reason should not be fed too heavily to hens that are liable to become fat. It is an invigorating food for hens that are moulting or debilitated, and also for growing stock. It promotes digestion, and assists in forming new feathers when the old feathers are being replaced by the new. A gill of linseed meal, three times a week, to ten hens, is ample, as too much is not beneficial.

INQUIRIES ANSWERED.

Fertile Eggs.—J. B. C., Healdsburg, Cal., writes: "Will you please inform me how we may know when eggs are fertile?"

REPLY:—It is impossible to distinguish a fertile egg until it has been under a sitting hen for four or five days, when, by holding the egg to a strong light, with the aid of an egg tester, the fertile egg will show a dark, spiderlike spot, while the others will be entirely clear.

Probably Vermin.—Goose Neck, W. Va., writes: "What is the cause of my poultry dying? They get weak and drowsy, and their combs turn black. They do not lay, and I feed them well."

REPLY:—The symptoms given are not sufficiently explicit, as the combs turn dark under many conditions. The difficulty is probably due to the large lice that infest the heads and necks. Try an application of sweet oil on the skin of the heads and necks.

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BETTER to eat thin soup from earthenware, if you owe your butcher nothing, than to dine off lamb and roast beef and know that it does not belong to you.

PULLETS SHOULD BE LAYING.

Young pullets hatched in March and April ought all to be laying this month. Later hatched ones, if not laying by December, will probably, if left to themselves, not lay before spring, when eggs are down to fifteen cents per dozen. A well-known poultry farmer showed us recently his account for last December with 125 pullets. The net profit for that month from eggs alone was \$39.39; from the same pullets in April following, the profit was \$14.97, and he got 50 dozen more eggs in April than in December. Now this is a striking lesson to all who keep hens for profit. Get all the eggs you can this dull year when other crops are short, as eggs always bring cash. Probably 45 cents per dozen by Christmas. Therefore, get the pullets to laying early when prices are highest. Rev. S. W. Squires, of Franklin, Mass., says: "For the purpose of seeing how many eggs I could obtain last winter from 12 hens, I used four large cans of Sheridan's Condition Powder. I believe it is the best preparation known to increase egg production. I saved part of the eggs for hatching after forcing the hens four months for all they were worth with the Sheridan's Powder, and I never had a greater per cent of fertile eggs or more vigorous chickens. In brief, I do not believe I can afford to be without the Powder to give health and vigor to young hens." Six cans of Sheridan's Powder will pay a good dividend in eggs if you commence early. If you cannot get it near home, I. S. Johnson & Co., 22 Custom House St., Boston, Mass. (the only makers of Sheridan's Condition Powder), will send for 50 cents two 25-cent packs of Powder; for \$1, five packs; for \$1.20, a large 2 1/2-pound can, all postpaid; six cans for \$5, express prepaid; one large can of Powder, also one year's subscription to the Farm Poultry, monthly, both sent postpaid for \$1.50. Sample copy of paper, 5 cents. Send stamps or cash. Testimonials sent free.

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This is your opportunity. A new departure. SILKS direct from the manufacturers to you. Our reduced prices bring the best goods within reach of all. We are the only manufacturers in the U. S. selling direct to consumers. You take no risk. We warrant every piece of goods as represented, or money refunded. See our references. We are the oldest Silk Manufacturers in the U. S. Established in 1838, with over 50 years' experience. We guarantee the **CHAFFEE DRESS SILKS**, for richness of color, superior finish and wearing qualities, to be unexcelled by any make of Black Silks in the world. We offer these Dress Silks in Gros Grains, Satins, Surahs, Faille Francaise and Aida Cloths, in Blacks only.

Send us a 2c.-stamp (to pay postage) and we will forward you samples of all our styles free with prices, and you can see for yourselves.

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RECOLLECT we send to all parts of the U. S. With each Dress Pattern we present the buyer with 1000 Yards Sewing Silk, and enough Silk Braid to bind bottom of dress.

THE GOODS are delivered to you **PREPAID** all carrying charges.

CARDS Finest Sample Book of Gold Beveled Edge, White Dove, Hidden Name Cards ever offered with agt's outfit for 2 cents. NATIONAL CARD CO., SCHIO O.

THE LADIES' HOME JOURNAL

For OCTOBER contains the opening chapters of **MAUD HOWE'S Society Novel, "PHILLIDA."**

"Phillida" is a story of English society life, written by one who thoroughly knows her ground. With her distinguished mother, Mrs. Julia Ward Howe, Miss Howe lived for some time in England, and her talent and beauty made her eagerly received among the very best people. She has made good use of her rare opportunities, and has studied the charms and foibles of English society with a keen and impartial eye. The heroine is an American girl who goes to England and creates a furore in London society.

FLORENCE HOWE HALL contributes another paper on "Affectations and Inelegancies of Speech."

SUSAN COOLIDGE writes a splendid story for the girls—"A Coming Out"—treating of a young girl's training for a society "coming out."

"A New York Woman of Fashion."

Pen portraits of a dozen well-known society women of New York. Written by one of the "four hundred."

MARGARET E. SANGSTER contributes one of her graceful poems—"In the Night Season"—beautifully illustrated.

"Forgotten Graves of Famous Authors."

by Edw. Bok. One of the most interesting papers ever published.

All Hallow Eve—a nutting shake and other games. Illustrated.

Autumn Brides and Brides Maids—with other fashion matter complete. By our own Mrs. JOHN W. BISHOP, now in Paris, furnishing the latest news in Styles, Novelties, etc., for *The Ladies' Home Journal*.

Other features are "Nursing in Fevers," by Mrs. A. R. RAMSEY. "Practical Home Dress Making" by EMMA HOOPER. "Flowers and House Plants," by EBEN E. REXFORD. "English Meat Teas." "Talks with the Doctor," etc.

The Ladies' Home Journal is the ideal home periodical for Christian, cultivated families. Pure in tone, never sensational, always an unobtrusive moral in its fiction, and always helpful and practical. It employs the most distinguished writers and artists, and is filled with the best obtainable original matter. Is always new, fresh, and attractive by its handsome printing and illustrations. It is read by everybody; at least it has nearly half a million subscribers and buyers, a larger circulation than any other periodical, which shows its great popularity.

The October Number is ready on the news stands, and costs but 10 cents a copy. A Three Months Trial Subscription may be had for only Twenty-Five Cents, sent direct to the publishers.

For ONE DOLLAR we will mail *The Ladies' Home Journal* from now to January 1st, 1891—that is the balance of this year—FREE, and a FULL YEAR from January 1st, 1890, to January 1st, 1891.

CURTIS PUBLISHING Co., Philadelphia, Pa.

ONLY 10c. For HOUSEWIFE

THREE MONTHS,

And Your Choice of Five Great Publications 1 Year, CENTURY, HARPER'S OR SCRIBNER'S, as You Prefer.



"THE MISS PILKINSES' PUDDING," a charming story by Cora Stuart Wheeler, introduces the Thanksgiving Number of the *HOUSEWIFE*. The scene is laid in a New England town, in which Dolly and Phillis Pilkins are two of the most honored and lovable inhabitants. How they lost their inheritance; how they lived their eventful lives; and in how strange a manner one Thanksgiving day, that day of all days to every true-hearted New Englander, their little fortune was returned to them, every reader will be deeply interested in following. In the story, "A NICE, OLD WOMAN," Florence Allen relates the happy solution by one young lady of the difficult problem of self-support under trying circumstances. That the children are not forgotten the delightful story, "PANKSIBEN," by John Preston True, and poem, "A HIGH TEA," by Isabel Francis Bellows, testify. Eleanor W. F. Bates, so well known to *HOUSEWIFE* readers, furnishes pertinent suggestions to mothers in regard to "CHILDREN'S PARTIES." They who are anxiously inquiring what to make for Christmas gifts will find their questions answered, with illustrations, by Emma Moffett Tyng in the department of "HOME DECORATION." The articles described are new and the directions so explicit, that the one paper is worth a year's subscription. For those who can paint, Alice H. Crockett furnishes suggestions for many a dainty offering. The department of "PRACTICAL DRESS" is conducted by Jenny June, whose advice on fashions is always authoritative. "LATE AUTUMN STYLES," "MODERN ADVICE IN METHODS," "HOW BABIES ARE CLOTHED," "NO MORE TIGHT LACING," "A NEAT COAT AND A LOVELY HAT" are some of the subjects discussed. An attractive feature in this department has been a series of articles on HOME DRESSMAKING, and this month the collar is considered. One of the special characteristics of *HOUSEWIFE* is "CHAT-BOX," ably edited by Agnes C. Stoddard. The Chat-box is thrown open to all subscribers, and for November is, as ever, running over with good things. For the lovers of Knitting and Crocheting, the *NEEDLE WORKER* is ever found reliable, and directions alone are given that have been thoroughly tested. The illustrations are made especially for this department.

George R. Knapp, for years interested in the culture of flowers, and a practical writer upon floriculture, edits the floral department. "PREPARE FOR WINTER," "WOMEN IN HORTICULTURE," "HINTS FOR THE MONTH" and "TWO DESIRABLE PLANTS" are the subjects in November issue. Anna R. Henderson has contributed to our kitchen department a pathetic poem, "A COMMON LOT." "A THANKSGIVING DINNER" has been prepared for the *HOUSEWIFE* by Catherine Owen, who, as every good housewife knows, always spreads an inviting table. The bill of fare is most appetizing, and the directions so plain that no one need hesitate to serve it.

The *HOUSEWIFE* gives more for the money than any other publication. It entertains with the most delightful stories. It instructs by answering questions on all subjects interesting to its patrons. The most gifted writers in all the different departments of social life. We cannot begin to tell you about it in this advertisement. One woman expressed it when she wrote to us: "Each number is so much better than the preceding, I don't know what you will do by and by." Send 10 cents for three months and learn how it is yourself.

N. B. Mention FARM AND FIRESIDE, as the 1st, 20th, 50th, 70th, 100th and 200th persons answering this advertisement will each receive a year's subscription to either *Century Magazine*, *Harper's Monthly*, or *Scraper's Magazine*, *Harper's Weekly*, or *Harper's Bazar* as you prefer. We do this to get you to mention FARM AND FIRESIDE. We want to find out how many FARM AND FIRESIDE readers buy *HOUSEWIFE*. If you should be entitled to choose one of these publications, you can, if you are already a subscriber to that publication, have your subscription begin when present subscription expires. Only 10 cents for three months. Address

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A KNIFE TO SWEAR BY!
Blades made on honor!
Cut exact size; price 75 cents. Samples for 25 cents. Postpaid. Boy's 2-blade, 25 cents. Ladies' pearl 35 cents. 8-inch 50 cents. 10-inch 75 cents. 11-inch 1.00. 12-inch 1.25. 14-inch 1.50. 16-inch 2.00. 18-inch 2.50. 20-inch 3.00. 22-inch 3.50. 24-inch 4.00. 26-inch 4.50. 28-inch 5.00. 30-inch 5.50. 32-inch 6.00. 34-inch 6.50. 36-inch 7.00. 38-inch 7.50. 40-inch 8.00. 42-inch 8.50. 44-inch 9.00. 46-inch 9.50. 48-inch 10.00. 50-inch 10.50. 52-inch 11.00. 54-inch 11.50. 56-inch 12.00. 58-inch 12.50. 60-inch 13.00. 62-inch 13.50. 64-inch 14.00. 66-inch 14.50. 68-inch 15.00. 70-inch 15.50. 72-inch 16.00. 74-inch 16.50. 76-inch 17.00. 78-inch 17.50. 80-inch 18.00. 82-inch 18.50. 84-inch 19.00. 86-inch 19.50. 88-inch 20.00. 90-inch 20.50. 92-inch 21.00. 94-inch 21.50. 96-inch 22.00. 98-inch 22.50. 100-inch 23.00.

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66 S. Street,
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CARTS, BUGGIES & HARNESS AT 1/2 PRICE
Order direct from the factory and save the profits of middlemen. Why pay \$90.00 for a Buggy when you can buy of us a **BETTER BUGGY, INCLUDING HARNESS, FOR \$50.00.**

For Cash to **INTRODUCE OUR WORK**, Address with stamp, **U. S. BUGGY & CART CO. CINCINNATI, O.**

LADIES, CAUTION! As our advertisement both in general appearance and wording, by advertisers who seem to be devoid of principle, and, as a recent advertisement, purporting as coming from one MARION WALKER, of Louisville, Ky., may probably mislead, (having all semblance of our own) we desire to say that we have no disposition, and it is contrary to our business principles to draw money from unsuspecting women. We have no interest in the advertisement referred to other than to protect ourselves against suspicion.

EMORY & CO., Cincinnati, O.

ON 30 DAYS' TRIAL.

THIS NEW ELASTIC TRUSS

Has a Pad different from all others, is cup shape, with Self-adjusting Ball in center, adapts itself to all positions of the body, while the ball in the cup presses back the intestines just as a person does with the finger. With light pressure the Hernia is held securely day and night, and a radical cure certain. It is easy, durable and cheap. Sent by mail Circulars free.

EGGLESTON TRUSS CO., Chicago, Ill.

SEND 2-cent stamp to O. C. BLAKE, Topeka, Kas., for prospectus of weather predictions for 1890.

Married Ladies Write for Information Health Agency, 235 Broadway, N. Y.

GOLD, SILVER, & NICKEL WATCHES GIVEN AWAY.

In order to obtain new subscribers to our well-known paper, the *LADIES' HOME VISITOR*, we make the following offer: Send us 20 cents, stamps or silver, and we will send you our paper regularly for 4 months, and in addition we will give to every person sending 20c. for Paper and telling us where the word **RAIN** is first found in the Bible (name book, chapter and verse) an elegant solid gold Hunting-Case Watch, Elg n Movement. To the next one giving correct answer, a handsome Silver Watch. To the next 50 who tell us correctly, a handsome Plated Watch, each. To next 100, if there are as many, we give a handsome Solid Gold or Filled Ring. Should 100 more answer correctly, they will each receive a handsome pair of Bracelets, of Pearl shell, and if we receive 150 more correct answers, each one will receive a handsome Pearl Necklace. Everybody who answers this advertisement will not only receive our paper for 4 months, but an elegant Stamping Outfit from a selection of over 200 different designs. Book of Instructions with each outfit. This is a great offer. You are bound to get a valuable present if you write now. This offer is not good after November 1st, as we give a list of lucky ones in December issue, which goes to press at that date. Address **Avon Pub. Co., Box 5820, Boston, Mass.**

FREE SAMPLE CARDS for 1890. New Styles, Beautiful Designs. Low prices and BIG OUTFIT FREE. Send 2c. stamp for postage. **U. S. CARD CO., CADIZ, O.**

Smiles.

THE BEEFSTEAK.

You may talk of spring chicken and quail upon toast,
Or anything else of which epicures boast,
But when you are hungry there's nothing can take
The place of a juicy and savory steak.

Two inches in thickness it ought to be cut,
With snowdrifts of fat on it sweet as a nut;
And always remember when buying it that
Prime meat must be streaked and covered with fat.

Quick, turn it and turn it with many returns,
While melting fat merrily blazes and burns,
Imparting rich flavor. Keep turning and—
there,

'Tis done, with its inside red, juicy and rare.
Now pepper and salt it and on a hot plate
Enjoy it at once—not a moment to wait,
And then you'll acknowledge that nothing can take

The place of a luscious and juicy beefsteak.
—Goodale's Sun.

LIFE IN CAMP.

I HAVE been down in camp on Mad river for several days past, painting my pale, professional skin with vile mahogany and punctuating my person with the gash-like wounds of the alert and murderous mosquito of the river bottom. During the six nights I was in camp I hoarded 1,917 mosquitoes, setting them up about the daintiest lunch the country ever saw. When they had feasted like lords on my quivering flesh and wanted dessert, they hit me on the brain.

There is something funny about the mosquito that lives near the river. He is the most insolent beast on earth. He has the wings of a huzzard, the strength of a steam engine, the appetite of a hyena, the bill of a creditor and the courage of the devil. He stabs you whenever he likes, and selects the choicest outlets from your person. He hasn't even the decency to confine his operations to the night. He is on duty always, and believes in meals at all hours, both *table d'hôte* and *a la carte*. By the time I had finished being the menu for a covey of mosquitoes for six days and nights, I had the appearance of a map of the moon.

It is fun to see these mosquitoes catch fish. I take my solemn oath that last week I saw a mosquito dive into the river and bring out an eel that measured four feet from the tip of his tail to the opposite bank. The mosquito then bit the eel in the throat, severed its neck-tie and its little brown jugular vein, and then proceeded to make a square meal off the squirming eel. This is a joke that I have carried about my person for several weeks and never had occasion to touch off before.

The river-bottom mosquito has a deep contralto voice, ranging from the lower "C" to the shrill and piercing "Q." I have lain on a cot at night within the tent and heard its hoarse yell as it hore down upon me like the wolf on the fold of the bed-clothes. I have heard its hattle-cry as it swept down upon my tempting and succulent chin, there to feast like a winged god. Some of the best blood in the camp ran in the veins of that mosquito. Every night it bit me.

Another feature of camp life is the cot. The fellow who wrote "A palace or a cot, it matters not," was a liar, and darsent take it up. He can take the cot and sleep on it till he has corns on his liver and I will pick out the palace and take it with me. The cot is your bed in game, but it has a pleasant, ungovernable habit of folding you in a warm embrace that I don't like. I fed my cot to a mosquito, the other night, and he carried it away with him.

EDGAR ALLAN MORGAN.

PRESERVING HIS REPUTATION.

"I suppose you have heard of the elopement."

"No. Who are the parties?"

"George Emley and Susie Patton."

"Why, they had been engaged for several months and had already gained the consent of their parents."

"That's all right, but they have eloped just the same, and what is more, the father of the girl put up the job and gave the girl \$100 on the eve of her departure."

"I don't understand it."

"Plain enough. The marriage was to take place in a month and it was to be a swell affair, but the father of the girl met with some reverses and found it impossible to pay the expense of a grand wedding, so he got them to elope, thereby saving the expense of a wedding, and getting sufficient, gratuitous advertising to help him out in his business."—*Carl Pretzel's Weekly*.

CLASS IN PHYSIOLOGY.

Omaha Teacher—"Will some member of the class explain how we hear things?"

Bright Sprig—"Somebody tells pa something down town, then pa tells it to ma as a profound secret, then ma tells it at the sewing society meeting and then we all hear it."—*Omaha World*.

IT'S VERY EASY.

She had purchased a hammock at a store on Woodward avenue, and as she received her change she asked:

"Are there any printed instructions to go with it?"

"No, ma'am," replied the clerk. "You swing it between two trees, wait for a dark night and then go out and practice falling in and rolling out. In a week, if you are persistent and don't mind the bruises, you can get to that point where you can fall in before a dozen people, but as to getting out you had better put in another week on falling downstairs and gracefully bringing up in the hall."—*Detroit Free Press*.

AN APPROPRIATE CORRECTION.

It would be hard to beat the reply credited to the court chaplain of Sweden to a socialist who was trying to air his theories at court. The socialist insisted that "the Savior was a communist." "Yes," was the ready reply, "with this difference: Christ said 'what is mine is thine,' but you say, 'What is thine is mine!'"

TUITION OF GEORGE.

Eastern Speculator—"Who is that man on the monument?"

Citizen (of Mudville, Northern Dakota)—"Why, that's George Washington, the man who couldn't tell a lie, you know."

Eastern Speculator—"Ah, I see, and they put him up there to get some pointers from real estate agents."—*Life*.

GETTING THERE GRADUALLY.

He—"Do you read the current fiction of the day?"

She—"Not very extensively, I am ashamed to say. However, I did wade through 'Robert Elsmere,' and I intend to read this 'Pigs in Clover,' that everybody is talking about."—*Burlington Free Press*.

TWO GREAT MINDS.

"That's stuff," said the editor as he handed the poem back.

"That's tough," said the poet as he turned sorrowfully away.

And yet the editor and the poet did not at all agree.—*Lawrence American*.

LITTLE BITS.

The cannibal is known by the company he eats.

The only thing which heats a good wife is a bad husband.

Food which tramps don't relish—Cold shoulder.—*Prairie Farmer*.

You may salt, you may season the cucumber if you will, but the old gripe prerogatives will cling to it still.—*Bradford Republican*.

"All a woman wishes is to be loved," says a gushing poet. Then all this stuff about her wanting new bonnets and sealskin sacks must be a vile slander.

A fashionable dressmaker has received an order for a gown with "one of them vestibule-trains that are talked of so much in the papers."—*Town Topics*.

"I can't understand all this fuss about electricity for executions," remarked Judge Lynch, of Kansas, reflectively. "Out in our section we have used the telegraph pole for years."

"I say, conductah, how comes it that we've reached our destination half a minute late?" "Front end of train's on time. Rear end's allus late."—*Harper's Bazar*.

He—"I wonder which of those two young ladies is his sister?"

She—"Why the brunette, of course. Didn't you notice that she had to put on her wrap herself?"

Husband—"Wife, I wish you had been born with as good judgment as I, but I fear you were not."

Wife—"You are right. Our choice of partners for life convinces me that your judgment is much better than mine."

ALTOGETHER TANGIBLE.

So long as one is not asked to concentrate faith upon illusion there ought to be no backwardness in getting into a receptive mood at least. Note the encouragement in the following:

"The Compound Oxygen Treatment did more to effect a cure than all other so-called remedies combined." G. DUNCAN BALLINGER.

SUMTER, S. C., March 13, 1888. "My wife had been suffering from severe neuralgia for weeks, and was relieved from the beginning by the Compound Oxygen." REV. J. S. BEASLEY.

MIFFLINTOWN, PA., March 29, 1888. "I have now used the Compound Oxygen three weeks. I am very much improved in every way, and believe that by the blessing of God your valuable remedy will restore me fully." REV. E. E. BERRY.

LITTLE ROCK, ARK., March 30, 1888. "I am happy to inform you that I am of the opinion that your Compound Oxygen saved my life." MR. J. P. BAILEY.

We publish a brochure of 200 pages regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia, all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DR. STARKEY & PALEN, 1529 Arch St., Phila., Pa.; or 120 Sutter street, San Francisco, Cal.

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Give away as Premiums
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The same Premiums allowed on Coffee as Tea. Send your address for our 64 page Illustrated Catalogue, containing complete Premium and Price List.—Mention this paper. Address THE GREAT CHINA TEA CO., 210 State Street, BOSTON, MASS.

The Great China Tea Co. Give away as Premiums White Tea Sets, 56 and 70 pieces, with \$10 and \$11 orders. Decorated Tea Sets, 44 and 56 pieces, with \$11 and \$13 orders. Moss Rose Tea Sets, 44 and 56 pieces, with \$13 and \$20 orders. White Imported Dinner Sets, 112 pieces with \$20 orders. Decorated Imported Dinner Sets, 112 pieces, with \$20 orders. Decorated Imported Toilet Sets, 10 pieces, with \$10 orders. Moss Rose Imported Toilet Sets, 10 pieces, with \$10 orders. Hanging Lamp with Decorated Shade, with \$10 orders. Stem Winding Swiss Watch, Ladies' or Boys', with \$10 orders. The same Premiums allowed on Coffee as Tea. Send your address for our 64 page Illustrated Catalogue, containing complete Premium and Price List.—Mention this paper. Address THE GREAT CHINA TEA CO., 210 State Street, BOSTON, MASS.

SPONGE CATARRH CURE.
Medicated inhalation universally conceded to be the only rational cure. Our Sponge Catarrh Cure is the only continual Inhaler in the world. The sponges (Fig. 2.) are saturated with our Wonderful Inhalant Mixture and placed in the nostrils as shown in Fig. 1. It is not uncomfortable, hardly noticeable. Thousands of cures. It will cure you. Cures catarrh, catarrhal headache, coughs, bronchitis, asthma, etc. Try a bottle and be convinced. Ask your druggist for it. If he does not have it in stock, we send a trial bottle by mail, postpaid, on receipt of only 50 cents. Order now before you forget it. Address Wright Bros. & Co., Springfield, Ohio.

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A Premium for only ONE Trial Subscriber.

In addition to the above Grand Prizes, you can select any ONE of the articles named below for each Trial Subscriber you send at 15 cents, thus giving you valuable premiums as pay for your trouble, and also an Equal Chance for the Cash Prizes.

1 Dozen Lead Pencils.

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CASH COMMISSION

If you prefer it, you may retain a Cash Commission of 15 cents for each club of 4 Trial Subscribers, instead of the above premiums, and the names will all be counted in the contest for the Cash Prizes.

You should endeavor to obtain the names of your friends as Trial Subscribers for both papers, collecting 15 cents for each, 30 cents in all, and, of course, all such will be counted as two subscriptions.

Names of subscribers should be sent in promptly as soon as secured, and an account will be kept with each agent until the end of the contest. Less than 4 names received at one time will not be counted in the contest. The premiums for clubs of subscribers must be selected when the names are sent in.

The contest is open to men, women, boys and girls, and all have an equal show. All you want is the WILL.

Order Premiums by the Numbers, and address all letters to

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KANSAS HORTICULTURE. First biennial report of the state society, 1887-8. From G. C. Brackett, Secretary, Lawrence, Kansas.

STATISTICS OF RAILWAYS IN THE UNITED STATES. First annual report to the Interstate Commerce Commission, for the year ending June 30, 1888. From the government printing office, Washington, D. C.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF NURSERYMEN, held at Chicago, Ill., 1889. From Chas. A. Green, Secretary, Rochester, N. Y.

GRIFFITH'S TREATISE ON MANURES, or the philosophy of manuring. A practical handbook for the agriculturist, manufacturer and student. Price, \$3. Published by D. Van Nostrand Company, 23 Murray and 27 Warren streets, New York.

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Fancy Creamery...	24 @ 25	25	23 @ 27
" Dairy.....	17 @ 20	19 @ 21	13 @ 15
Common.....	7 1/2 @ 10	7 1/2 @ 8	
GRAIN.			
Wheat No. 2 spr'g	80 1/2		
" No. 2 w't'r	80 1/2	85 1/2 @ 86 1/2	
Corn.....	31 1/4 @ 33 1/2	10 @ 41 1/2	41 @ 45
Oats.....	18 1/4 @ 22 1/4	24 1/4 @ 35	28 @ 31
LIVE STOCK.			
Cattle, Extra.....	4 65 @ 4 85	4 75 @ 4 85	
" Shippers.....	2 70 @ 4 60	4 25 @ 4 70	2 25 @ 2 75
" Stockers.....	1 90 @ 3 20		
Hogs, Heavy.....	4 00 @ 4 20	4 50 @ 5 00	4 00 @ 5 50
" Light.....	4 50 @ 4 65		
Sheep, com. to good	3 25 @ 4 50	4 00 @ 5 50	2 00 @ 3 00
" Lambs.....	3 65 @ 5 85	5 00 @ 7 50	
PROVISIONS.			
Lard.....	6 12 1/2 @ 6 15	6 40	6 75
Mess Pork.....	11 15 @ 11 25	11 50 @ 12 00	12 00
SEEDS.			
Flax, No. 1.....	1 28		
Timothy.....	1 21		
Clover.....	3 40 @ 3 80		
WOOL.			
Fine, Ohio & Pa.	31 @ 35		
" Western.....	29 @ 31		
" Unwashed.....	16 @ 23		
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18 PAGES, WITH SUPPLEMENT.

EASTERN EDITION.

VOL. XIII. NO. 3.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, NOVEMBER 1, 1889.

TERMS (50 CENTS A YEAR.
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The Circulation of FARM AND FIRESIDE
this issue is
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The Average Circulation this year, or for the
21 issues since January 1, 1889, has been
239,223 COPIES EACH ISSUE.
To accommodate advertisers, two editions
are printed. The Eastern edition being
100,000 copies, the Western edition
being 150,000 copies this issue.

Current Comment.

AN Ohio subscriber writes us not to spend much time on the question of fence or no fence, and says that, as it is settled that we must have farm fences, the practical question with him is, what is the best fence? Well, the best fence has not yet been invented—that is, the fence that will suit every one. It is not to be expected that one kind of fence will suit under all circumstances, but even where the conditions are alike the same fence does not suit every one. One farmer will build a substantial board fence, while his next neighbor will put up a wire fence, and as each one has what suits him best he will claim that it is the best. Neither kind being perfect and each having its advantages and disadvantages, the difference of opinion is easily accounted for. On the question of fence or no fence no one expects a sudden revolution, but where it is practicable, fences will generally be abolished. The first to go will be the unnecessary ones dividing the farm up into small, irregularly-shaped fields. A little study of the situation in Ohio, where fields average good size, will convince one that there is a vast amount of useless fencing. An economical subdivision of the farm would save many thousands of dollars. Any agitation that will direct attention even to this part of the fence question will result in good.

As to the best kind of fence, that will depend on circumstances, the available material, cost of construction, the purposes for which it is intended, etc., so the selection must be left to the good judgment of the builder.

FARM AND FIRESIDE respectfully asks all its patrons to be very particular when writing to give their full address, plainly written. We receive, as does every other firm doing a large business by correspondence, a great many letters that are deficient in the address of the writer. Some are unsigned, in some no post-office is given, and in others both name and post-office are omitted. In some plainly and carefully written letters there is so much individuality about the signature that it is utterly illegible. Many of these letters contain stamps, or a small amount of money, but it is impossible to fill the order on account of the deficiency in the address of the writer. The best that we can do with such a letter is to file it away and wait for a complaint from the sender. If the letter of complaint contains the complete address, the order can be filled and everything satisfactorily explained—with considerable extra work, sometimes amounting to more than the value of the order. But the same mistake,

or omission, is sometimes repeated in the letter of complaint.

For instance, several weeks ago some one who sent us a letter containing money, forgot to sign his name. Since then we have received three letters from the same party charging us with defrauding him, but the letters are all unsigned. His carelessness is chronic. Now that is taking an unfair advantage of us; he neither gives us a chance to fill his order or talk back to him. He owes us an apology.

Many of our readers would, doubtless, be surprised to learn of the great number of unsigned letters every business firm receives. The trouble all arises from a little carelessness, but it causes a great deal of annoyance and dissatisfaction all around.

Be sure and write your full address, and write it plainly.

THE people of this country have the reputation of being the most extravagant in the world. While there are many shining examples of true thrift and economy, the people as a whole are extravagant in their way of living. Often this extravagance is more real than apparent; that is, people spend so much money in unnecessary ways. It is more a misdirection than a wilful waste of their money. But sometimes it is worse than a waste. One of the strongest temperance arguments is that the vast sum of money annually spent in this country for intoxicating liquors would, if properly used, produce as much happiness as it now does misery. The habit of plainer living and the practice of true economy would help much to make hard times easier.

The New York Journal of Commerce says:

Self-denial is not only the law of greatness and of goodness, but also of all material success. The sunken reef on which so many enterprises are wrecked may be labeled with the one phrase, "self-indulgence." Sometimes, like the coral bed, it is formed of many minute particles that combine to founder the adventurous bark; and again it is the single rock against which the voyager is dashed with a sudden tempest. A young couple who had rented a cosy flat and were making their first essay at housekeeping, found it impossible, they said, to make both ends meet. A wise friend bade them put down for two or three weeks every cent of their disbursements, even where the money went for a postage-stamp or a ferry ticket, and to bring him the list at the end of that time. He heard nothing from them for a month and went to see them. The man and his wife both laughed as he brought up the subject, and said frankly that the expense book was an unexpected revelation. They found that more than half the amount of their earnings had been spent for things that might just as well have been omitted, and a little sober self-denial had made them more than self-supporting, for the wife brought out a little wooden bank, the contents of which already jingled with the two or three weeks' savings.

The great bane of the poor, by which we mean those who live from hand to mouth, is their want of a resolute self-denial in the use of their daily or weekly earnings. And this runs all the way up to the man of business, who wastes his thousands a year through self-indulgence on the part of himself or his household, and finally goes down in credit and pocket for want of the capital which might have been gathered in the exercise of a proper self-restraint. Young clerks, whose salaries have been deemed by them to be insufficient for their decent support, would find a surplus left,

if they would practice a little self-denial, and would soon be able to lay by something, however small, of a stipend that seemed so inadequate. If every person who has failed to accumulate any savings from his annual income would put down on paper an accurate account of his disbursements he would soon find where a little judicious self-denial would enable him to begin the long-neglected fund for a wet and wintry day.

AT the Pan-American Congress the formation of an American customs union is one of the most important questions to be discussed, and, at the same time, the one requiring the most careful handling. For, before it can be adopted and go into effect, there must be some great changes in the customs laws of the different countries, something very difficult to make. And, upon its adoption depends, in a great degree, the future intercommerce of the American nations. Success requires the wisest diplomacy and the broadest statesmanship. The delegates to the congress are not vested with legislative powers. The most they can do is to agree on a basis for such a union, and then recommend it to their respective governments. Then in each one will come the selfish war of conflicting business interests. And the European nations that now have a monopoly of the South American foreign trade will do all they can to prevent the establishment of a customs union, or anything else that will tend to divide their markets for manufactures with any rival.

Reciprocity can not be one-sided. The United States must meet the other American countries half way before a commercial union can be formed.

ACALL has been issued for a national silver convention, to be held in St. Louis on the 26th of November, 1889. As set forth in the circular sent out by the promoters of the convention, the subject to be discussed and the object sought to be obtained is "the rehabilitation of silver as one of the money metals of this country."

To the demonetization of silver by Germany, France, the United States and other countries, the silver men attribute all the financial panics, and trade and business depression, of the last sixteen years. Considering the suspension of silver coinage as the main if not the sole cause of periodical trade stagnation, the only remedy they offer is the free coinage of silver. Surely, somebody must be mistaken about the cause of depressions in trade and business enterprises. Some so-called reformers lay it all at the doors of the national banks, and demand the abolition of the national banking system. Others say it is the protective tariff, and demand a tariff for revenue only. Now, if they could only agree among themselves as to just what are the real causes of the ills that afflict us, it would not take long to find and apply the proper remedy.

In the circular it is claimed that the demonetization of silver enables England to constantly depress the prices of our wheat, breadstuffs and cotton, and the following is offered in explanation:

The population of India is about two hundred and fifty millions. India is governed by Great Britain. For the boon of this government England charges India about eighty

millions of dollars annually. England, in August, 1873, for a purpose to us not then but now apparent, demonetized gold in India, and established there the single silver standard. Germany, the United States and France suspended the coinage of silver. That metal was thus driven to the mints of India, where it found free coinage, and where it had not, and up to this time has not, lost its purchasing power as compared with gold. Now, this eighty millions due annually from India to England is paid by drafts drawn upon the Council of India. These charges are payable in London where gold only is legal tender; hence are payable in that metal. India cannot afford to send silver to England to pay these drafts, because when silver reaches London it is not money but depreciated bullion. Consequently, Indian merchants buy up all the wheat, cotton and breadstuffs, possible, and ship these articles to London and sell them to procure the gold with which to liquidate these Council drafts. And so it is with interest on debts owing to English investors for the construction of railways and other enterprises in India. Thus the production of wheat and cotton is stimulated in India as a means of export to meet foreign payments. This has enormously increased the export of wheat and breadstuffs from India to England. It has the further effect of lowering the price of wheat in England, for the lower the price of silver in London the more of it gold will purchase. Silver not having lost its purchasing power in India, will buy as much wheat as ever. Consequently, to say that gold will buy more silver this year than last, is synonymous to say that gold will buy more wheat this year than last.

The fact is, and statistics prove it, that wheat, cotton and silver have uniformly and steadily declined together.

UNDER the leadership of the New England Homestead there has been formed, in Massachusetts, a Farmers' League, for the purpose of electing honest butter men to the state offices and the legislature. The anti-oleo bill failed to pass the last legislature, and the farmers are now up in arms and determined to send men to the next legislature who will favor the bill to prohibit coloring oleo like butter. They have not organized a new party, or placed candidates of their own in the field, but will throw their entire strength to candidates of the regular parties pledged to work for their interests. Their first work is to force all parties to nominate honest butter men. This will leave every man the opportunity of voting his own party ticket and still voting for representatives that will protect his interests. Failing in this, their votes are to be cast, regardless of party lines, for honest butter men. This farmers' league means business. Candidates are requested to state, in writing, their position on the oleo question, and this is to be made known by the league, officially, to the voters. The farmers of Massachusetts consider that they were betrayed in the last legislature, and will not put any faith in a verbal, evasive promise. The united action of the farmers of this one state promises much, and it will be a good example to follow.

THE American Fat Stock show will be held in Chicago, November 12th to 21st, 1889. This annual exhibition is given under the management of the Illinois State Board of Agriculture, and the board promises that the show of this year will surpass any heretofore held, in value of exhibits and interesting attractions.

FARM AND FIRESIDE.

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We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

Our Farm.

AGRICULTURAL CHEMISTRY

From the Standpoint of the Practical Farmer.

BY JOSEPH (TUISCO GREINER).

No. 20.

DRAWBACKS OF USING STABLE MANURE.

—One of the FARM AND FIRESIDE subscribers, A. S. A., of Pittsfield, Ill., writes that after trying various fertilizing materials, he has come to somewhat different conclusions concerning their value than those expressed by me in previous issues of the paper. Bone meal, for instance, has given him excellent results on strawberries, while chip stnff, bran, tankage, etc., showed no results. Our friend also says that I do not take sufficient notice of the extra cost of applying barn-yard manure, or of the great expense of fighting weeds which grow wherever it is put. Bone dust manuring, for this reason, he thinks, is the cheaper by one half. He is just starting a nursery and would like to make the ground as rich as possible.

I do not think that our friend and myself are so very much at variance, after all. The weed seeds contained in most barn-yard manure are the one great drawback which I have pointed out a great many times to our readers; and indeed, one so serious that it will do no harm to speak of it again. With some crops, corn, potatoes, orchard, raspberries, etc., this feature of barn-yard manure may be less objectionable; with others, and especially with strawberries, also with onions and other close-planted garden crops, it may be just the thing that invites complete failure. Fully appreciating the manurial value of the stuff, I fear to use it for strawberries, and I have always strongly advised my friends to keep stable manure entirely out of the strawberry field, unless they are sure that it is reasonably free from foul seeds. Wood ashes, bone dust and potash salts, or some good, high-grade, complete, concentrated fertilizer may be used for this crop with the most satisfactory results, and without running the slightest risk of propagating weeds by their application. To insure in a measure exemption from the weed pest, the grower could well afford to pay even extra prices for his plant foods.

The greater expense connected with the application of barn-yard manure when compared with that of concentrated fertilizers has also frequently been pointed out by me, and it should always be taken in consideration when comparing the cost of the two kinds of manurial substances.

The good results observed from the ap-

plication of bone meal proves that the soil is deficient in just this one element of plant food (phosphoric acid); hence, it would only entail larger expense to use a complete fertilizer (like barn-yard manure) instead of a simple phosphate, without giving us much better results. This also has been mentioned by me repeatedly.

In the production of nursery stock, our aim should be to grow firm wood, none that is tender and oversucculent. What we want, therefore, is plenty of mineral elements of plant food in the soil. Much nitrogen is neither required, nor desirable, except in the fore part of the season. This same principle is applicable in orchard and fruit growing generally. If the soil is in fairly good heart, and already provided with potash, as shown by the good results obtained from bone meal, this latter alone need be applied. If potash is lacking also, we must use some potash salt in addition, or wood ashes in place of the two. Applications of nitrate of soda, very early in the season, are usually very serviceable in promoting early growth, thus prolonging the season and securing the proper ripening of the wood. For somewhat thin soils, however, I would gladly use stable compost, and expect good results from it, without fearing any of its "drawbacks."

NITRATE OF SODA.—I have frequently alluded to this form of nitrogen as one of the most valuable for a great many special purposes. In view of its immediate and certain effect, it may justly be considered one of the cheapest sources of nitrogen. All the more, it's a pity that American farmers and gardeners have not yet learned to appreciate it, and the chances it affords to the shrewd tiller of the soil. Indeed, it is yet so little used in this country, and so limited is the present demand for it, that the Chilean exporters thus far have entirely ignored this demand and our otherwise so enterprising fertilizer manufacturers do not care to handle the nitrate. For this reason, not a pound of the cheaper, impure grade

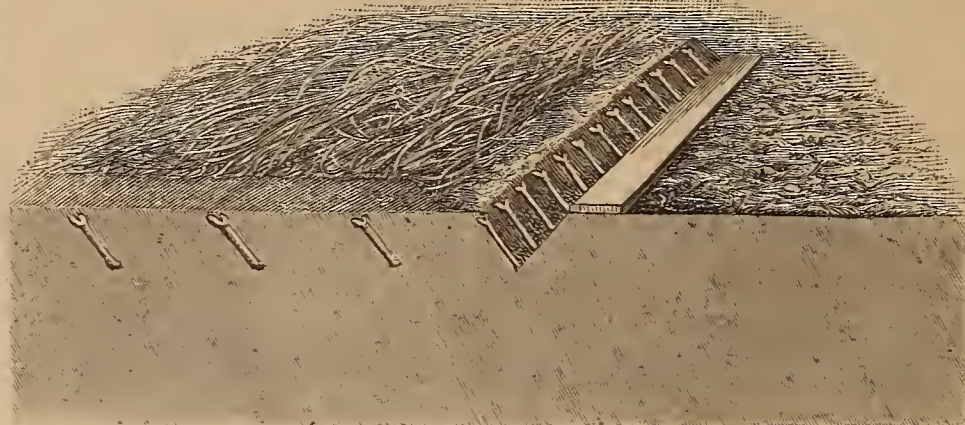
and can be utilized by soaking the empty bags in a barrel of water, and applying this to growing crops. The sifted nitrate can be sown broadcast by hand. I have always thrown it promiscuously and rather carelessly over the crops, such as onions, beets, spinach, lettuce, celery, etc., and I have never had reason to complain of much injury to the foliage. It will be safer, however, not to sow the stuff when the plants are wet with rain or dew. I also invariably use it alone by itself, and can see no reason why we should mix it with any other fertilizer before sowing, although this could be done without loss, if the other articles to be mixed with it—wood ashes, phosphate, etc.—are perfectly dry, and the mixture is to be used immediately.

The next query is, what is the stuff worth to us as a fertilizer in dollars and cents, or how much can we afford to pay for it?

FALL PLANTING OF CUTTINGS.

There are two ways of proceeding with hard-wood cuttings for propagating purposes.

The first and most common way is to cut, tie in bundles and keep until spring. They are variously kept in sphagnum moss, in sand and sawdust. Clean, pure sand is the best, applied in the damp condition that it is dug from the pit, and kept as near as possible in that condition during the winter. Sawdust is the poorest, as it does not pack closely and dries more easily. Whatever is used, it should be used liberally enough to insure continued dampness, and the drier the cellar or storage room, the more important that the dampness should be assured by this means, or by frequent inspection. It is often the case that amateurs forget to examine their cuttings for months, and they become dried on top, killing or seriously weakening the top buds, while the bottom is all right. Putting the cuttings in a tight box, deep enough to hold six or eight inches of sand or sphagnum



METHOD OF PLANTING CUTTINGS.

—which strictly is the fertilizer nitrate—is imported to the United States, while progressive growers in Europe consume a hundred thousand tons or more a year. I think it high time that we should wake up to the importance of this matter, to learn the value of nitrate of soda and begin to call for it, so that we can have the same facilities for obtaining a supply as European growers, instead of being forced, as at present, to appear before the fertilizer manufacturers in the role of supplicants, and to ask, as a favor, for the privilege of buying at a good price the higher-rated, almost chemically pure nitrate of soda which is now imported chiefly for chemical purposes.

Mr. Joseph Harris tells us in *American Agriculturist*, that "the chief point from which this nitrate is obtained is Ibiague, Chili. There is an export duty on it of ten dollars per ton. Vast beds of it extend for two or three hundred miles along the west coast of South America. These beds are supposed to have been formed by decomposing seaweed. The cheaper grade imported into Europe and largely used there by farmers, especially for sugar beets, is ground fine, and the farmers have no trouble in getting or using it. The nitrate imported to America is shipped in bags holding about three hundred pounds each. Before sowing the nitrate, empty the bags on the bare floor. Then break up the lumps, and run it through a sieve, such as is used for sifting ashes, or still better, a finer one."

Some, of course, adheres to the bags,

ou top of the cuttings, with not less than two inches at the bottom, will generally, in an ordinary earth-floor cellar, keep them all right for six months. The cuttings should be packed in an upright position, butt end up. The object of placing them this end up is so that they can be warmed up in the spring by setting in the sun an hour or two a day, while the tops continue dormant. This hastens the forming of a callous on the butt and the rooting commences in advance of the leaf growth.

In burying cuttings out of doors—which, in the case of grapes, I always practiced, putting butts up when in the business—they should be placed in a place where the spring sun will strike them, and then the butts will be nicely calloused when the ground is in a condition to plant. If packed in very small bundles of not more than ten or a dozen, and well separated by sand, the time of planting may be delayed three or four weeks, the only danger being of breaking off buds. A hole should be dug deep enough to take the cuttings six inches below the top, and when filled should be covered with a thick mulch of leaves to protect from the frost. These leaves should be removed when the frost is partly out.

However, I began to write about fall planting, which, properly managed, saves time in spring, saves labor and risk of winter packing, and in case of June drouths much more successful than any other method. One can practice it as late as the holidays, provided the weather is

sufficiently open, one of the best percentage of vines I ever got being planted on the second of January, on ground prepared in October, and from which I removed two inches of frozen crust and a light fall of snow. The cuttings, if of grapes, should be cut obtusely, slanting immediately below a bud and about two inches above a bud eight inches above the lower one. In long-jointed wood there will be but two buds and one internode; in short-jointed wood there may be three, four or more in a ten-inch cutting.

The beds may be eight or ten feet wide, and should be thoroughly plowed ten or twelve inches deep. Then, after leveling and raking, put on three inches of thoroughly-rotted, fine manure. Then, if time is an object and it is desired to put off the planting until winter sets in, cover the bed with straw or leaves and let it lie. When ready to plant, remove the mulch, and placing a straight-edged board across the bed at one end and standing on the board with the back to the main part of the bed, remove the earth along one edge of the board, throwing it up in a little bank, making a V-shaped trench, the back side of which shall be on about the same slant as the side of a V. Smooth it up with the shovel and then stick in a row of cuttings, placing them about two and a half inches apart. Then move the board sixteen inches, and with repeated small shovels of manure and earth from the edge of the board fill the trench already planted half full, when it should be carefully tramped down, insuring a thorough packing of the soil at the base of the cuttings, which is essential to success. I forgot to say that the upper bud should be about one half inch below the surface. After tramping, the balance of the earth may be filled in while completing the second trench, which is to be planted like the first.

This method is the same as in spring planting, but there is one thing further in autumnal planting that must not be neglected, or the cuttings will, in spring, be half their length out of the ground and ruined beside. This is a thorough frost-proof mulch, which may be an inch of rotted manure, then six inches of leaves and on top two or three inches of straw or evergreen boughs, to keep the leaves in place. The mulch should extend two feet outside the edge of the bed. This mulch should be kept on until the ground is warm and freezing weather is past in April, when all may be removed except the thin layer of manure.

Currants should, by all means, be planted in the fall, and long cuttings of hardy and climbing roses may be successfully planted at this season, provided a cold-frame be set over them to give additional warmth in fall and spring, the mulch being in the form of banking around the frame and matting over the glass. Cuttings of many hardy shrubs may be planted in autumn like grapes, as snowball, forsythie, weigela, etc. Quinces and gooseberries likewise, although I prefer growing these from stools by layering.

Summit county, Ohio. L. B. PIERCE.

THE APPLE IN CALIFORNIA.

The culture of the apple in California has given satisfaction and profit to but few of its planters, for it is essentially a northern fruit, best suited to a climate with a sharp distinction in the temperature between summer and winter. It also likes nearly constant moisture for leaf and root. The early pioneers who first fruited the apple here went nearly wild over the size, beauty, flavor, aroma and coloration of the fruit, and the wonderful productiveness, health and vigor of the tree. But alas, the fruit would not keep. The famed winter apples of the East, such as Rhode Island Greening, Baldwin, King, Russett, etc., etc., grew to enormous size and ripened up in August and September and soon went to decay. The season was too long; the air was too warm, and the soil was too warm and dry for the apple. Other varieties were tried, the winter keeping varieties of the far South were imported and tested, some of them giving better results, but none perfect. Apples could be grown in unlimited quantities, but they were of no value, scarcely at all. The home market was quickly supplied, and there were few or none that would

keep for shipment. Labor was too costly to admit of drying, and freight charges were too great to compete with the East. Therefore, soon there was little use for the apple. Cider was tried. It could be made in nearly sufficient quantity to irrigate the state, but cider, like the apple tree, needs winter cold for its perfect development, so it was no good. The trees, when they had the least bit of care, flourished amazingly, and bore every year enormous crops of the choicest fruit, with scarcely a disease or insect to injure them. But gradually, with the importation of trees, roots and scions from nearly every other apple country, trouble began, and culminated in the introduction of the codling moth or apple-worm, so soon as the overland railroad got through, at Sacramento in 1874. This pest had never before found so choice a climate to grub around in, make a living in and breed in as California, and it just spread itself. It had no enemies whatever; instead of one and two broods in a season, as it was satisfied with East, here, having nothing else to do, it developed three or four each season, and they were great and healthy broods at that. It spread over the state like a cyclone, and it was good-by to sound apples in California. The few large growers who had great capital invested in apple orchards and who had faith in apples, fought it bravely in every conceivable way, but the fast-breeding apple-worm kept on top generally, with the result that there are thousands of orchards in the state to-day from which an apple is never marketed. Yet a few large growers, thorough, careful workers, have cared for their orchards as perfectly as possible with their knowledge, and made nice, fine profit from them each and every year, but such profitable orchards were located in soils and climate peculiarly favorable to the apple. This (Sonoma) county, and Marin, directly south, are finely adapted to the apple and handy to market. But the day of the kingdom of the apple-worm in this region is a thing of the past, for its ranks are being decimated by its insect enemies, and after a very careful study of its habits and biology here I am confident that it can be fully controlled, well-nigh exterminated, by spraying with arsenical poisons in solution with water. I am confident that it can be controlled here much more easily and perfectly by the use of these poisons than anywhere East, and I will say this, if I were a young man, with some capital, and wished to make big money growing fruit of any kind in California, I would plant apples and small fruits to make me that money, right here in this northern coast region. And this, after a very careful study of the fruit capacities of the whole state, I feel positive that there is a grand reward in them, notwithstanding the great boom on stone fruits, oranges and raisins.

Good spring, summer and autumn apples can be grown nearly everywhere in California. Here the apple and orange, the pomegranate and the pear, fruit side by side lovingly, grandly, perfectly. But there are only certain locations where fine winter apples, that will keep, can be grown. These are scattered all over the state, north and south. These locations are directly on the ocean side, or high up on the mountains. I have seen as fine winter apples that were grown on the San Bernardino mountains, away south, as ever grew anywhere. But the northern coast region, with the help of a thorough irrigation about August 1st, would be the "boss" point of the world for winter apples. Nearly everywhere in the state the apple tree gives a big crop, usually entirely too big every year. Now as to the mildness of this local climate, we can see a curious and certain proof by going into any apple orchard to-day, where we will even yet see the most delicate dried petals of the blossoms in the eye of nearly every apple.

In the local markets here there is no sale except for a very few varieties of apples, and some of these which are in the greatest demand are of the very poorest quality, but of good size and very handsome. The Ben Davis and Alexander—what could be lower in quality?—"take the cake." East, the majority buy fruit in the market by eyesight, for size and beauty; here, nearly every one does. But

Californians are fast developing that faculty known as a "long head," and there are hopes of pomological sense in her coming generation, for already in the city market the Downing strawberry, from reason of its fine quality, sells for double the price of the great Sharpless, or shapeless, as it should have been named. The apple has a great future in California if planted in the right locations, especially the winter apple, for they can be shipped cheaply to the antipodes and all the islands of the seas.

D. B. WIER.

WOOD ASHES AS A FERTILIZER.

In FARM AND FIRESIDE, October 1, 1889, Joseph gives a valuable paper on "Wood ashes and their value." In it he places the value of a ton of unleached, hard-wood ashes at \$11.60, and says that "the farmer can better afford to pay \$15 for them than the usual rates for almost any commercial fertilizer."

Of some soils this would be true, but there are soils that do not respond to the use of ashes.

I had often heard and read of the value of ashes when used on many of our crops. A few years ago I got from a baker one ton of ashes made from hickory. These had been put into a large, brick bin as rapidly as had been made. They were thoroughly protected from moisture. Twenty bushels of these were used in top dressing one fourth acre of strawberries. The ashes were hoed and cultivated into the ground. This was done across one end of the bed, so that all varieties planted received a share of the ashes. I anxiously awaited results the following season, but was unable to discover them. I also made similar tests on potatoes and corn, but could not find that I was repaid for my labor. My ground responds well to the application of stable manure, and where the clay is heavy, coal ashes produce as good results as any thing applied. The good results of coal ashes comes entirely from their mechanical effects on the soil.

One of our principal market gardeners here relates his experience with ashes as follows: "In New Jersey we used all the ashes we could get and bought them by the car-load. When I located at Dayton I was surprised to find that the gardeners paid little attention to the use of ashes. I laughed to myself at their folly, for I was able to get all the ashes I wanted if I would only haul them away from the manufactories. I used them liberally, but could not see that my yields were any better than my neighbor's. From early training I still use ashes, but I can see no particular advantages in their use." Whilst I should not want to use on our clay soils a manure or a fertilizer devoid of potash, yet I should not go to any more trouble to secure a ton of unleached, hard-wood ashes than I would to secure a ton of good stable or barn-yard manure.

Many agricultural writers have advocated this plan: Find what your ground lacks and supply that. Use nitrogen on one plot, potash on another, and phosphate on another, also combine either two. This is a safe plan when tested by the farmer on his own farm, for he is then likely to discover the truth. But when farmers think, as some of them have been led to, that they can send a sample of their soil to a chemist and there be told to profitably apply any one of the three principal plant foods to the exclusion of the others, they are in error.

Experiments made at the experiment stations have shown that the use of a complete fertilizer will increase the yield a greater per cent than the sum of the per cents of potash, nitrogen and phosphates used separately. To make this plainer, we will consider the following, which are the results of tests:

Potash increased, yields.....	5	per cent
Nitrogen " "	6½	" "
Phosphate " "	7	" "

A combination of the three increased the yield 30 per cent. No farmer can afford to be entirely guided by the results of another's work, but he must know the wants of his own land, and of the crops that he grows.

THEO. F. LONGENECKER.

Montgomery county, Ohio.

SOME PRACTICAL SUGGESTIONS ON CLAY ROADS.

Clay roads can only be made into satisfactory ways by means of effective drainage, so contrived that the least possible water will remain in the material which feels the effect of the tread of the draft animal or the down-wearing thrust of the wheel. Deep side ditches are absolutely necessary for such roads, and the narrower the roadway the more effective will be this drainage work. It is a great mistake in such roads to have any more width than is imperatively necessary for the uses of the structure. If the ditches extend to a depth which would maintain the crown of the road two feet above the water level, and the roadway is of the least possible width, the problem of protection against mud is most easily solved.

To effect any satisfactory solution of the difficulties which beset such roads it is necessary, however, either to construct an artificial surface of timber or of stone, which is always a matter of great cost, or to mingle some binding materials with the clay. If gravelly materials, or, what is better, shingly waste, such as is often produced by frost action on slaty stones, can be commingled in the proportion of one half with the clay, a firm road-bed can commonly be secured, provided the road is well ditched. This commingled gravel or other solid substance must extend at least for a foot below the surface. In order to withstand any heavy carriages. In many cases an equally good result can be accomplished by covering the surface with repeated coatings of any shrubby vegetable matter. In northern Minnesota I have seen the material known as "excelsior;" that is, strip-like shavings, cut by machinery from blocks of wood, serve admirably to prevent the motion of the clay, and I am of the opinion that it would, in clay countries, where stone cannot readily be obtained, but where timber is plenty, be an admirable device to have a machine for making excelsior to be used as a road material. On the surface, such woody matter rapidly decays, but when worked by the wheels into the clay it may last for several seasons. At no great cost the material might be saturated with creosote, and thus rendered much more resisting to decay. The finest branches of trees, the leaves of pines, even rushes, may serve the need, if they can be cheaply applied.—Professor N. S. Shaler, in *October Scribner*.

THE FUTURE OF DAIRYING.

It is difficult to forecast the future, but there are some signs on the horizon of the dairy interest which it would seem cannot be misinterpreted. It is now a pretty well established fact that the growth of the dairy interest has overtaken the growth of the population, so that the supply is now quite equal to the demand, and dairying is no longer so much more profitable, as it was a few years ago, than other branches of agriculture. Owing to the fact of its profitability, the effort in all new sections has been to get hold of more cows, without much regard to quality, and go into dairying. This is still true to some extent, but the comparatively low prices for dairy products during the last two or three years have been rather discouraging.

Now, what is to follow? We need not look for much falling off in production, but may very reasonably expect a check in the extension of the dairy industry. Instead of more cows, as in the past, the effort will be to secure better, so that the same amount can be produced with a less number of cows, in this way getting a profit out of the prevailing low prices. Better and cheaper methods of manufacture will be introduced, and a more rational system of feeding and caring for dairy stock must follow. The profits must come from cheapening production and improving quality. This will encourage consumption.

Meantime, all should be done that can be to increase the home consumption of both butter and cheese by supplying consumers with a more palatable article—especially of cheese. With a little effort and a better article, the consumption of milk as food might be greatly increased. Average milk contains 13 per cent of sol-

ids, composed of the most valuable food elements, in the best condition for digestion and assimilation. Two pounds of milk, or one quart, retelling usually for six cents, contains as much nutritive matter as a pound of clear lean beef, costing two to three times as much. It is one of the cheapest and most nutritious articles of food that can be had, and the greatest profit to the producer is realized by its direct consumption. Its manufacture always entails waste and loss. Better dairy stock, cheaper production, and improved quality are what are needed.—T. D. Curtis, in *New England Homestead*.

ALFALFA IN NEW YORK.

The results of experiments to test the value of alfalfa, summarized in a recent report issued by the New York Experiment Station, lead to the following conclusions: 1. That lucerne or alfalfa may be successfully grown in New York state. 2. That when once established it thrives well upon clay land, but will probably do better upon good, light loam. 3. That seed two years old loses its vitality and fails to germinate. Undoubtedly, many of the failures to secure a stand of plants may be traced to poor seed. 4. That the seed bed must be well prepared, and, in this latitude, it seems best to plant out the seed in the spring, and with no other cover than rolling the ground. 5. That for seven successive years at the station, three and four cuttings per year have been taken from the plots. 6. That last year, the sixth in succession, the plots yielded more than fifteen tons per acre of green forage, equal to 5.6 of alfalfa hay. 7. That alfalfa should be cut in early bloom, before the plants become woody. 8. That it should be cured largely in the cock to produce the best quality of hay. 9. That by chemical analysis the hay was found to be more nitrogenous than good red clover. 10. That cattle, sheep and horses all relished the hay and seemed to do well. 11. That it was found to be more digestible than red clover hay. 12. That if farmers would try this crop we advise them to begin with a small piece of well-prepared land, in order to see whether alfalfa does as well with them as it has at the station. 13. That probably success with alfalfa will depend largely upon having fresh seed, a good, carefully prepared seed bed, and in covering the seed slightly with soil.—*Ex.*

TESTING SOILS BY THE COLOR OF PLANTS.

M. Georges Ville, a French scientific agriculturist, after almost thirty years of assiduous researches on the experimental farm at Vincennes, has made a remarkable and important discovery of a relation existing between the color of plants and the richness of soils in fertilizing agents. His conclusions, recently reported to the Paris Academy of Sciences, deserve consideration by all farmers and horticulturists.

He finds that the color of the leaves of plants undergoes marked change whenever the soil is lacking in phosphate, potash, lime or nitrogen. The color remains light green or turns to yellow when the soil is deficient in phosphate, potash or nitrogen. When none of the fertilizing elements are wanting the color is dark green.

By his experiments, M. Ville furnishes agriculturists with positive indications by which they can determine with the greatest facility what kind of a fertilizer the soil needs most or in what elements of fertility it abounds. His experiments should be repeated by our Department of Agriculture and the results published. The practical information which might thus be supplied to American farmers would enable many of them to "make two blades of grass grow where one now grows."—*New York Herald*.

INK FOR ZINC LABELS.

A legible and permanent black ink for labels may be made as follows: Verdigris, one ounce; sal ammoniac, one ounce; lamp black, half an ounce; rain water, half a pint. Mix in an earthenware mortar or jar and put in small bottles. To be shaken before use, and used with a clean quill pen on bright zinc.—*Exchange*.

Our Farm.

GARDEN AND FIELD NOTES.

BY JOSEPH.



POTATO TESTS.—Once more I have to report a partial failure with potatoes. While I feel terribly disappointed over it, yet I am not disposed to cry over spilt milk. More years, I hope, and more chances for making tests, are before me. The early crop was nearly ruined by incessant rain, flea beetles and blight, so I can give no estimate of the comparative value of the new varieties, but prefer to wait until I have the result of another trial.

The late patch, planted in all sorts of different ways—one to three long rows of each—for the purpose of comparing the effects of different ways of seeding, covering, manuring, etc., was greatly hurt by an eight-weeks' drouth, and also lost its foliage by the flea beetle and a mild form of blight, long before the tubers were half developed. The consequence is small potatoes and less than one half of a crop. Notwithstanding all this, I have been able to make some comparison between the yields of the various plats, and this showed the usual difference from lighter and heavier seeding, and in some other respects, proving that the growth of the tubers is in about the same proportion from beginning to end. Common, single-eye pieces, planted from eight to ten inches apart, yielded about 55 per cent of the yield from whole tubers planted a foot apart, giving a little over two bushels where the whole seed gave four bushels. Extra large, single-eye pieces cut from extra large, selected tubers, and planted six inches apart in the rows, yielded 75 per cent of the amount from whole tubers, or three bushels from the former to four of the latter.

This result again seems to be good evidence that we can obtain a pretty fair yield by the use of single-eye pieces, provided the latter are very large and planted very close, but that whole tubers, even if only of medium size, can always be depended upon to give the largest yields, and the largest individual tubers, besides.

The tests further proved the efficacy of the high-grade complete fertilizer (preferably one containing plenty of potash), and again indicates that the mode of application, either below or above the seed pieces, is of less consequence than the quantity applied. The more fertilizer the more potatoes. This old story came out again, this time on clay loam, as it had so many times before on New Jersey's sandy soil. Bone dust also increases the yield over no manure, but not to the full extent of the fertilizer containing potash.

The results, taken all in all, although in no way complete or conclusive, at least tend to strengthen previous observations and convictions, and in so far are not without value. I have yet to say that the yield from single-eye seeding does not seem to be influenced to a perceptible degree by any "special" way of cutting, size of seed piece being the only important factor.

WHOLE SEED.—The Maryland Agricultural Experiment Station has recently issued a bulletin giving the potato experiments of the horticulturist as embodied in the report for 1888. Here again it is shown that whole tubers invariably give the largest yield, and that the planting of medium-sized whole potatoes promises the most satisfactory and profitable returns. Among the conclusions drawn from a thorough trial of different methods of planting potatoes by the *Journal of the Royal Agricultural Society of England*, in 1869, we find the following: "Every increase in the size of the set, from one ounce up to eight ounces in weight, produces an increase in the crop much greater than the additional weight of sets planted. It may be broadly stated that the weight of the crop is proportionate to the weight per acre of the sets planted." Nearly ten years ago I came to the same conclusions by independent research, and in 1882 and 1883 began an earnest and vigorous warfare against the one-eye seeding craze,

then at its height, with the result of seeing the matter put to a thorough test and the heavier seeding doctrine almost universally accepted. I claim considerable credit for this achievement.

THE FLEA BEETLE.—The worst enemy to potato culture this season was the insignificant little flea beetle, which appeared in vast numbers and so badly injured the foliage that it dried up from this cause, or from the blight following. The *Rural New Yorker* thinks that the "blight" is given a chance to attack the plants only in consequence of the previous injury done to the leaves by the beetles. I am inclined to accept that opinion for myself, for in every case that came under my observation, where the plants escaped the attacks of the flea beetles, they remained green and growing until fall. I further believe that if we could keep all insects off the vines, we would have little trouble with the potato diseases in an average season.

Now comes the good news that a remedy for the flea beetle, whether affecting potatoes, cabbages or any other crop, has at last been found. If this remedy proves effective, it certainly will be a good one, and unlike Paris green and London purple, for instead of being liable to harm the foliage, it is a good and safe fertilizer, and, I believe, fully worth its price as such. This is tobacco dust. Prof. A. J. Cook (Michigan) reports that he has used it with happiest effect, and succeeded in putting the insects to flight. It is applied in the form of a tea, and sprayed on the plants by means of a force pump. If the remedy proves to be infallible, we shall hereafter have plain sailing. At any rate, I shall use it largely another season, and advise every one that has had trouble with the flea beetle to give the new remedy a trial and report.

POTATO SEEDLINGS ONCE MORE.—It may be of interest to many readers to be told what yields may be obtained from seedling potatoes the first season. Of course, there is a great difference, some seedlings giving only small tubers, the largest not being larger than a hickory nut, and the product of the whole hill altogether not weighing more than a few ounces. Other seedlings have yielded tubers of merchantable size. I have just weighed one of the best hills, and find it weighs two pounds, three ounces, all the result of a single, tiny seed in about five months. As the plants were set 15 by 12 inches, the yield of this hill is at the rate of 1,270 bushels per acre.

Another important fact connected with this is that the most of the plants were perfectly healthy all through the season, although very slightly affected by the flea beetle. The tubers were dug about October 1st, and then still green and growing. Altogether, I repeat, the experiment was interesting, and I advise all readers to try their hand at raising seedling potatoes.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INTERMINGLING VARIETIES.

BY PROF. J. L. BUDD, OF IOWA AGRICULTURAL COLLEGE.

On our fruit table this morning, we have specimen boxes of four varieties of the cherry; namely, Double Natte, Spate Amarelle, Large Long Late and Shadow Amarelle.

As noted in Bulletin No. 2 of our experimental station, these varieties do not differ very materially in size, quality or season of fruit, and there is little difference in the hardiness of the trees, perfection of the foliage, or their habits of early and continuous bearing.

Hence a visitor this morning remarked that it would be best to select the best of the four—taking all things into consideration—and to throw out the other three.

In regard to the conclusions reached after long years of experiment, trial, investigation, and observation by Darwin, as expressed in his "Cross and Self-fertilization in the Vegetable Kingdom," Dr. Masters said: "It is certain that these practical results will be a long time filtering into the minds of those who evidently

profit most by them." So far as I know, this prediction has been realized. Word comes to us from the Pacific coast that the great orchards planted with a single variety of the peach, apricot, cherry, plum, pear, etc., have proven unprofitable, while the same variety when mingled with others of its kind and season gave its annual load of fruit. They are now budding or grafting alternate rows with other varieties; but it is not because of Darwin's practical discoveries and learned statements in regard to what he called, "The sensitiveness of the sexual elements of plants to external influences, and the delicacy of their affinities."

The dollar-and-cent experience has "filtered" an idea into their minds where the scholarly statements of Darwin could not enter.

In about the same way the planters of large orchards of Duchesse de Angouleme pear in the states east of us learned the great lesson in cross-fertilization.

Still nearer home we have had exclusive orchards of the Willow, the Roman Stem, Duchess, and other apples, and in no case have they given fairly satisfactory crops, and the same is true of exclusive orchards of a single sort of the cherry and plum.

From the standpoint of experience and observation, the writer favors the intermingled planting of the orchard fruits and every one of the small fruits. This idea is now generally admitted in the planting of the strawberry, the Roger Hybrid grapes, and the Chickasaw plums.

But evidence now favors the belief that such perfect-flowered fruits as the Duchess apple, the De Soto plum, and the Concord grape are benefited in yield and grade of fruit by exchanging pollen with intermingled varieties.

The impression should not be conveyed that all varieties would fruit freely if properly pollinized. The Early Richmond cherry would not fruit regularly if surrounded with other sorts of its season. It is not hardy in fruit bud, is fragile in blossom, and often its foliage is so imperfect that it does not store the needed nutriment in the cell structure to hold or perfect a crop of fruit.

Yet taking five years together, Early Richmond trees—with mixed planting—will give much more fruit than will isolated trees or plantations that must depend on self-fertilization.

The same is true of dozens of varieties of the orchard and small fruits that often fail on account of tender fruit buds, bad foliage, imperfect ripening of wood or crowns in autumn, etc.

The idea I wish to impress is that we should select the most perfect and fruitful varieties known for our respective soils and localities, and then aid their fruitfulness by intermingled planting. As the season of blossoming is somewhat variable, some attention should be given to selection of alternating varieties. As instances, the Kentucky would not blossom with the Crescent strawberry, the Speer would not be in season to be fertilized by the De Soto plum, the Montmorency would not be in season for the Early Richmond cherry, and the Tallman Sweet would not fertilize the blossoms of the Duchess or Wealthy apples. Hence the value of the tables giving the season of flowering of all popular fruits which are so generally published in European reports and papers. As yet, we have no records of this kind, but "the agitation of thought is the beginning of wisdom." If the importance of the subject be recognized, our horticultural society will have a standing committee distributed over the state to tabulate the season of blossoming of all promising fruits of the orchard and garden.

In the meantime, the good results can be measurably secured by alternating the best sorts obtainable and wholly avoiding the planting of an isolated tree, or a block of trees, vines, etc., of one variety.—*North West.*

PROTECTING STRAWBERRY PLANTS.

The other day I witnessed a novel way of protecting strawberry plants from the cold of winter. The experiment was being tried on a field of thrifty, growing plants. In the rows where the plants

were growing, Hungarian grass had been sown and was just overtopping the plants. This would grow luxuriantly till it was about a foot in height, or till the heavy frost of late autumn stopped it, when it would die down and become an excellent protection for the plants. When spring comes, the dead, dry grass can be easily raked off and a rich coat of manure or fertilizer substituted. This would forward the plants by making them strong and vigorous and greatly increasing their bearing qualities. I have seen strawberries mulched with horse manure, and I have seen corn planted between the rows and left after the corn had been picked to serve as a protection for the plants, but I think this is a better way for many reasons. The field can be raked over about the first of September and sown. Of course, the time would vary in different localities, but time should only be given it to grow about a foot in height.

Connecticut. HENRY B. WARNER.

[Where good mulching material can be obtained cheap, it is better to mulch the bed. I do not favor the practice of sowing oats or Hungarian grass or millet between the rows of strawberry plants as a mulch, but prefer to allow the plants all the land to themselves. The plan is, however, a good one to remember in case one finds himself short of mulching material early in the fall, when it can often be used to a good purpose.—S. B. G.]

THE LAWTON AND ERIE BLACKBERRIES.

Within the past year the opinion has been frequently expressed, by persons of high standing as horticulturists, that the Erie blackberry is merely the old Lawton or New Rochelle under a new name. Having both growing and fruiting on my grounds in considerable quantity, I was impelled to institute a comparison between the two. In 1888 an obvious similarity was noticeable in their habits of growth, save that the Erie appeared to be of lower and more spreading habit, with somewhat more numerous and stronger spines.

Both are now (August, 1889) fruiting freely in adjacent rows, under the same mode of treatment, having been planted in the spring of 1888. The peculiar differences already mentioned are even more noticeable than they were last year; in addition to which, the Erie showed ripe fruit on August 1st, while none appeared on the Lawton till the 7th. In form, also, the Erie, although quite as large as the Lawton, is shorter and more regularly rounded. Of the twenty or more varieties growing on my grounds, the Erie is one of the most vigorous, and also the most unpleasant to handle on account of its strong and hooked spines. As to its relative productiveness and consequent value as a market variety, I am hardly yet prepared to speak confidently.—*Prof. Lyon, in Rural New Yorker.*

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Pears From Cuttings.—M. R. K. Both the Keiffer and Le Conte pears will grow from cuttings, and I think it preferable to so grow them. The trees are harder on their own roots than when grafted, and I believe they will be found to be longer lived. Grafting does not improve them, and the fruit is just as good from trees on their own roots as from those grafted.

Planting Peach Pits.—D. F. H., Fulton, Ga. The seed or pits, as they are called, may be planted in the fall or spring. If planted in the fall, they should be covered two inches deep if the soil is heavy, or three inches if light, in rows four feet apart and every three or four inches in the row. In spring planting, the pits are wintered over in a bed six or eight inches deep, in layers—first, two inches of seeds, then two inches of soil and so on until all are buried and the bed is eight or ten inches thick. The frost generally cracks the stones, but in the spring, if they are not cracked by the frost, they should be cracked by hand; this should be done by a slight blow of a hammer upon the edge of the stone, placed on a block of wood. The kernels should then be planted in rows the same distance apart as fall-planted pits and should be covered one inch deep. The advantage of fall planting is that it is less laborious, but there will be many vacancies in the rows, caused by the failure of seeds to grow, and as a rule, it is best to winter the pits over as described and to plant the kernels in the spring, when every one will grow.

Our Farm.

WARMING WATER FOR STOCK.

Your editorial of October 2, entitled "Chilled versus Warmed Water," contains so many good points that I almost hesitate to add anything to it, although there are one or two points that I would like to emphasize and add some facts which seem not to be well understood.

First, water should be hot, not less than 90 degrees, in order that it may be palatable. Our sheep took without injury and with apparent relish water at 105 degrees. Second, in order to induce animals to drink enough water in cold weather to furnish a solvent, or disintegrant for the large amount of dry matter consumed, especially by dairy cows, the animal should be kept warm. Some experiments with pigs last winter seemed to show that those kept in cold quarters were unable to consume as much food as those kept in warm quarters, simply because they could not be induced to drink a sufficient amount of cold water to make assimilable their food.

We heat the water for all our domestic animals, horses included, and we are quite certain that it gives us a saving either in food or in increased production of not less than 10 per cent. Farmers are certainly progressing. Fifteen years ago I was hissed off the stage at a dairymen's convention in New York because I advocated heating water for dairy cows. If one will compute the units of heat required to raise seventy pounds of water from 40 to 98 degrees they will have a slight conception of the amount of hay or corn that must be literally burned within the cow in order to accomplish the work. There is no dodging the fact that vast amounts of expensive carbonaceous matter are consumed by the old methods. Coal and wood certainly furnish units of heat cheaper than the foods usually used in the dairy.—*I. P. Roberts, Director Cornell Experiment Station, in Breeder's Gazette.*

THE BUTCHER AND THE FARMER.

Mr. Jones sold a bullock to Mr. Lazarus for \$16, to be taken and paid for when fat. When Mr. Lazarus came for the animal, Jones said he would like to have a fore-quarter for his own use. Mr. Lazarus willingly accepted the order, and after the bullock was slaughtered, delivered the meat. A few days later Jones went to town, called on Lazarus, and, as a preliminary to a settlement, asked for his bill. "Dot's all right, Mr. Jones; I haf the bill already made out. Here you are." Mr. Jones read:

Mr. Jones, Dr. to Jacob Lazarns—
To one quarter of beef, 185 pounds, at 10c.....\$18.50
By credit, one bullock..... 16.00

Balance due..... \$2.50
"Good heavens, Lazarus, you get three-quarters of the beef, the hide, tallow and offal, and bring me in debt \$2.50! How's that, old man?"

"Ah, Mr. Jones, that beef was sheep at 10 cents a pound."

"But, Lazarus, you only gave me \$16 for the whole bullock."

"Ah, but Jones, dot's pizness, pizness, do you see?"

"Well, Lazarus, next time I have a fat bullock I'll kill it myself, use one quarter and throw away the rest, and then I will save \$2.50. You see?"

"Ah! ah! but dot's not pizness; farmers should not be butchers—dot's bad."—*Butchers' and Live-Stock Gazette.*

EXTRACTS FROM CORRESPONDENCE.

FROM MISSOURI.—Mercer county is on the Iowa line, exactly half way between the Mississippi and Missouri rivers. It is half prairie and half timber. The surface is rolling, not too rough, except along some of the streams. We raise large crops of corn, oats, wheat, rye and some barley. This part of Missouri cannot be beaten for grass and pasture. As soon as the land is underbrushed, Blue grass comes without sowing. We have plenty of natural shelter here, free from blizzards in winter. Our soil is rich, and with proper care and rotation of crops need not be worn out. We have as good schools as can be found in the West. The county has about ninety school districts, and the public school fund apportioned the county this year is \$11,520.64. Land is worth from \$10 to \$40 per acre. Persons wanting cheap homes

in a good country need not go farther than this county.

P. J. S.

Mill Grove, Mo.

ABOUT ARKANSAS.—I wish to take issue with R. S. G., on the fertility of the soil of the Grand Prairie region in Arkansas. All is correct until it comes to the kind of crops that can be grown successfully on it. I lived near the center of that prairie country for two years, 1882 to 1884, and have seen nearly every acre of it, at all seasons of the year. There is no prettier country to look at, I am sure, anywhere, than these same prairies in May and June. But as for farmers making paying crops on them of corn, cotton, wheat and oats, it cannot be done without thoroughly tilling them. And I doubt very much if it can be successfully tilled, for the soil is the finest of fine silt, the finest and last sediment from rily water, the dust from mostly flint rock ground to an impalpable powder, most of it brought there hundreds of miles by the great Arkansas and White rivers, and laid down there in a quiet bog of what was at that time the sea shore, and supposed to be the largest body of fine silt in the world. It covers this whole prairie region from thirty to ninety feet in depth. It is not possible to grow corn or cotton crops on these prairies in their present condition. Corn will grow fairly well until large enough to shoot the tassels, then it stops growing and gradually dies. Cotton will not grow at all on them except on the summits of a few of the ridges; it grows fairly well on nearly all of the timber soils. The prairie grasses—nearly all peculiar, annual grasses and sedges—do grow rankly and finely, but, if the least bit overpastured, disappear entirely, noxious, worthless weeds taking their place. Strangely, broom corn, sorghum and nearly all the millets give fairly good crops. None of the cultivated perennial grasses of the North can be grown at all, nor any of the clovers. Bermuda grass and Johnson grass, both good pasture grasses, do finely. Nearly every other crop and plant except those named, such as peas, beans, turnips, potatoes, sweet potatoes, yams, etc., do finely. But when the farmer is forced to drop corn, cotton, wheat, oats, rye and barley and the tame grasses from his list of crops, there seems to be little left. From the list of fruits that can be grown there, the peach must be dropped out. The trees, as a rule, do well, but the fruit rots before maturity, except in rare seasons a few of the earliest and latest. So would, I am sure, European plums, nectarines and apricots. The other fruits do fairly well, except that but few of the apples will keep. Then, again, a large part of the prairies are too flat to grow anything on. I have seen too many thrifty, hard-working farmers go into that prairie country, pitch in, fence, plow and carefully put in and cultivate crops, same as they would in Illinois (or in any other way), and raise no crop at all of anything, spend their all there, and, if they did not leave their bones there, leave suddenly for the blizzards of the North, with complexions of a fine, yellow Spanish color. The higher portions of the prairies as far as possible from timber are fairly healthy for those acclimated to western malaria. But the timber lands along the streams are deadly for all except those acclimated to southern swamps and low lands; colored people can stand the climate. The winters, it is true, are mild, but very wet, damp and chilly, regular pneumonia and typhoid breeders, yet, with the best of care, housing and food, one can live on the higher, drier prairies in comparative health. I left there because I could plainly see it was "git out" or die. I got, when I could have become the owner of 1,440 acres of as good prairie as there is in Arkansas county at a cost of less than \$80, and had a fine business besides.

D. B. W.

GOVERNMENT LANDS.—I suppose there are thousands of intelligent people in the East who have no idea how to obtain a part of the public domain. If one wishes to go West and locate on government land, and has no idea in what state or territory such lands can be had, he should write to the general land office, Washington, D. C., for such general information as that office may have for such inquirers. This will bring him the general laws and rules on the subject, and statistics of such lands open for settlement. Then, after finding from this what state or territory he thinks would suit him best, he should write to the register of the land office of the district in which he wishes to locate. A list of such land offices you will find in the information from the general land office. He should then go to that district and look it all over to find a location that suits. After finding out what township the land he desires is in, he should go to the district land office and get a plat of that township, showing all the vacant lands, which costs a dollar. He should then go back and find the corners of the desired piece of land and see if it is vacant. If it is, he returns to the land office and pre-empt or homesteads, takes a timber claim, or timber right, as the case may be, or files a desert-land claim. In this case, all is free except the township plat. This is, of course, an extreme case, for usually one can find out from the settlers whether the particular tract wanted is vacant or not. A man going into a strange, mountainous, wild or desert country, in these days when we all have

"tender feet," might have a sorry old time of it locating land. It might take him or her a long, long time to "get there." Therefore, it has become the habit of private, local land agents, in this state at least, to keep on hand plats of vacant government lands of their own and surrounding counties, corrected up to date. And this is not all; they go and see them and make notes of their value, and can at once place the settler on them and show him the corners, for a very reasonable fee, besides make out his papers, etc., ten, often a hundred times, cheaper than he could hunt out the land for himself. The large real estate firms in the cities locate settlers in any part of the state. As carefully as this whole thing has been guarded by the government, there are still loop-holes in it for swindling, the worst of which is locating a man on false numbers; that is, pretending to locate him on rich valley land, while, in fact, the papers are made out calling for land away back in the mountains, so barren that 10,000 acres of it would not pasture a mule. This is criminal. But yet it is done. A local agent may be a great help and saving to one who wishes to locate on good government land. It costs big money to wander through mountains and desolate, arid plains in search of a free home. Under the laws as they stand to-day, one can, on this coast, acquire 1,280 acres of government land; namely, by pre-emption as above, 160; by homestead (by improving and living on six years), 160; by timber claim, 160; and by desert-land right, 640 acres. The homestead is free, also the timber claim if one fills the requirements. The others, all \$1.25 an acre, and all with small land-office fees added. Uncle Sam sells no land except as above, and the whole thing has about come to the point that one tract of land in North America is about as cheap as any other tract, if one has the money to buy. It takes some money and generally a large amount of privation and labor, and often actual suffering, to go into the wilderness, or arid plain, to carve out a home on free government land. I have no doubt but that one could buy here in Sonoma or adjoining counties, a few acres of land with a little house, on which he could make a better living, surrounded by all the good things of civilization, than he could on 160 or 320 acres in the backwoods, and that little piece of land here would increase in value for twenty years in as great a ratio as the wild land. Therefore, I think I can truly say that lands are as cheap, all things considered, in this region as elsewhere. Yet, W. Mc., of Santa Rosa, this county, says in the issue of FARM AND FIRESIDE for September 15th: "But don't expect to buy property here as cheap as you would in the East. You can't do it." Now, which is the cheapest, 10 acres of land here that will give you a net income of \$1,600 a year at \$300 an acre, or 160 acres in Illinois or Missouri, costing \$60 an acre? That's the way I put it. The ten acres is a long way the cheapest. D. B. W.

Petaluma, Cal.

FROM NORTHERN CALIFORNIA.—D. B. W. claims that there is a constant flow of heated air from the Golden Gate up the Sacramento valley, and that hence it is much hotter in this upper end of the valley than anywhere else. The facts in the case are, that the north wind blows during the hottest days in summer. At the north end of the valley are mountains 10,000 to 14,000 feet high, covered with eternal snow. The north wind comes over these snow-capped mountains, strikes the north end of the valley and sweeps on southward, growing faster and hotter on the course down the Sacramento valley for one hundred and fifty miles. Very few people, except those who live here, understand the peculiar advantages of northern California. North, with most eastern people and some Californians, is synonymous with cold. People of the Atlantic coast and northern states never dream that Shasta and Tehama counties, situated on parallel 40 north, are blessed with perpetual spring weather, where the fig and olive, the orange and lemon, raisin grape and prunes grow to perfection. Our average temperature is 50 degrees; spring, 60°; summer, 80°; fall, 60°. Average annual rainfall, 36 inches. This rainfall usually begins about the last of September and ends in May or June. It seldom rains longer than two or three days at a time, and the intervals between rains vary from two days to a month. As soon as the rain commences in October, the grass begins to grow, and by the first of December the country is covered with a green carpet of vegetation. The time to sow grain begins here in September and continues till March. All through the rainy season the farmers are continually plowing and sowing grain, and setting out orchards and vineyards. Apples, pears, peaches, prunes, almonds, and, in fact, all kinds of fruit, including oranges, do as well here as anywhere in California; and Prof. E. H. Hillgard, professor of agriculture in the State University at Berkeley, makes the statement that the raisins produced in Shasta county, and dried in the sun, contain five per cent more sugar than the raisins grown in any other part of the state. The truth of this statement can easily be ascertained by any of your readers who will address Prof. Hillgard and inclose him a stamp for reply. I can, if necessary, produce the sworn statements of merchants who handle fruit from all parts of this state, that the finest peaches sold in the

market come from Tehama county, and that the prunes, pears and oranges from Shasta county have no superior. Another point in this connection is, that many of the best results attained here in horticulture and viticulture has been and is on land homesteaded and pre-empted from the government, and not on high-priced land, from \$50 to \$500 per acre, as would be the case in counties on the coast and near the big city of San Francisco. D. B. W. would, doubtless, say that they could afford to pay higher prices for land for the very reason they are nearer the big city. In reply to that, we would say, we value the trade of Oregon, Washington, Idaho and Montana much more than the market of San Francisco. All the fruit for the states named that is shipped from the central part of California comes right up through northern California. It is a rapidly growing market, one that we value highly, and one that will be mainly supplied from Shasta and Tehama counties, when our thousands of young orchards begin to bear. Again, a more healthful location cannot be found anywhere on the Pacific coast. It is a well known fact, that people afflicted with consumption, bronchitis, asthma, rheumatism, and, in fact, any disease that is caused or aggravated by cold, damp, foggy weather, are continually leaving San Francisco and the coast counties, and making their homes in the upper end of the Sacramento valley and the bordering foothills. It is especially noticeable that women and children are seldom or never sick. The people all have a ruddy complexion, are healthy and happy. One of the prime reasons for the general healthfulness is that the water is pure, cold, soft and devoid of alkali and other impurities. The veins of water that are found so plentifully in the ground at from twenty to forty feet are generally supposed to have their source in the snow-capped mountains forty miles away. D. B. W. says he once lived in Illinois, and was a nurseryman, and knows good climate. I, too, spent twenty years in Indiana and Illinois, and when I came to California six years ago, I went to Sonoma county, but owing to my predisposition to consumption, the physicians advised me to look for a home up this way. Since then I have put out forty acres of fruit, hence, claim to know something of fruit raising, soil and climate. M. G.

Cottonwood, Cal.

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LOST LIGHT.

cannot make her smile come back—
That sunshine of her face
That used to make this worn earth seem,
At times, so gay a place.
The same dear eyes look out at me;
The features are the same;
But, oh, the smile is out of them,
And I must be to blame.

Sometimes I see it still; I went
With her the other day,
To meet a long-missed friend, and while
We still were on the way,
Her confidence in waiting love
Brought back for me to see,
That old-time love-light to her eyes
That will not shine for me.

They tell me money waits for me;
They say I might have fame.
I like those gewgaws quite as well
As others like those same.
But I care not for what I have
Nor lust for what I lack
One little as much as my heart longs
To call that lost light back.

Come back, dear banished smile, come back!
And into exile drive
All thoughts, and aims, and jealous hopes
That in thy stead would thrive.
Who wants the earth without its sun?
And what has life for me
That's worth a thought, if, as its price,
It leaves me robbed of thee?

—Edmond S. Martin, in Scribner's.

A CHILD OF NATURE.

BY JEANNETTE H. WALWORTH,

Author of "Southern Silhouettes," "True to Herself," "The Silent Witness," "A Strange Pilgrimage," Etc., Etc.

CHAPTER III.

A RING AND A PROMISE.



It looks like a sheer taking advantage of an ignorant fellow creature, young man, and I can't do it, not even for Una's sake, which, I guess, is putting it about as strong as I can put it. I think there's about one ounce of

envy to every pound of generosity in your composition, and I don't propose to sell out on the basis of charity."

Fenton Cooper, seated opposite his host in a skiff in which they had been making the rounds of the place, smiled gravely at the old man's antiquated honesty.

"I think you have done about all a man could do to disgust me with this place; nevertheless, Mr. Upham, my offer stands."

"But you made a bid for the place before the levee broke. My heavens, what a shock it was!"

"Afterwards, I hadn't an idea what that discharge of artillery meant. I think I shall never forget the sound."

"Yes, yes. I believe my memory is falling. But we thought, then, we could save the place. Now, every foot of it is under water. I am a ruined man, Mr. Cooper."

"You are a made man—or will be when you have sold out to me."

"But you said you weren't purchasing for yourself."

"The deed is to be made out in the name of Mr. Randolph Bascombe, and mailed to him at No. 201 Lexington avenue, New York City."

"But—"

Fenton Cooper interrupted him a trifle impatiently:

"I haven't more than an hour left, Mr. Upham, and I want to say good-by to your wife and daughter. What have they not been to me these three weeks past? We have been discussing the purchase of this place solidly for two weeks, now. I tell you that my friend has a fancy for trying his hand at this sort of thing, and that he can command the means to make it secure against a repetition of such disasters as this overflow. He wants to try your climate, too. I am armed with all the specifications I need, and unless you receive a telegram from me within a week, telling you he has backed out, you are to forward the deeds to this address."

He opened his memorandum book and gave Mr. Upham a printed business card which he took from it.

"Now, then, I shall fling my things into my bag and say good-by to the ladies."

They had reached the house by this time. But Una was not to be found when he went to say good-by to her and Mrs. Upham. They searched the house for her; Mrs. Upham lifted her voice authoritatively; Mr. Upham lifted up his persuasively; but the big, empty hall only echoed the sounds, without giving ingress to Una.

Fenton Cooper looked at his watch and frowned. What a thing of moods she was! She knew that he was going to take the steamer that morning, and he dared not tarry any longer, for, if he missed it, it might be days before he could get another one, and,

for reasons explicable to no one, he must be in New York City before the title deeds to the Upham estate reached that place. Una had seemed to feel his going, when he had told her about it, the evening before, and yet, here she was, perversely keeping out of the way of saying "good-by."

"I suppose there is no use waiting any longer," he said, looking anxiously from the face of his watch to Mrs. Upham's. "Miss Upham has purposely absented herself."

"Absolutely useless to wait," said Mrs. Upham, secretly rejoicing in this token of Una's indifference. "She's just like a thing gone daft, when the water's up. As like as not she's five miles away from home, at this moment, paddling about in her pirogue."

"Is the pirogue quite safe?" asked Fenton, anxiously. "It looked to me a miserable, little, toppy affair."

"The water is not deep, and Una can swim like a duck. The pirogue is safe enough for one person, if he sits steadily in the middle. Una is all right."

Fenton turned quickly on his heel. Why should he stand there worrying over a pretty little hoyden, who did not care enough for him, or for the common courtesies of life, to forego her wanderings until he had taken his leave conventionally. This wayward child, with her bright eyes and untrained ways, had proven a fascinating study to him, during his enforced stay, but they would soon enough put her into the mill now, and grind her into a fine society lady. Then she would be no more to him than the hordes of pretty, well-dressed, vapid girls who filled his sister's New York parlors on her reception days.

He had a horror of those reception days, although he made a conscientious point of always being present. He wished Marie could see this little Una Upham, just as she was in one of her merry moods before they should

Just then, from a critical survey of his prospective purchase, his eyes turned with flashing pleasure towards a pretty sight just come within their range.

From behind the sheltering walls of a long, low building, Una's little green pirogue shot suddenly into view. She was sitting facing him, plying the broad, short paddle now on one side the tiny craft, now on the other. The bright blue and white of her boating dress made a vivid spot of color in the landscape. Her broad straw hat was drawn down over her eyes so that nothing of her face was visible but the smooth, round chin, sadly browned, now, from exposure to wind and sun. She clasped the paddle in her little, brown, bare hands firmly and skillfully, and as she bent to her work, her round, white throat heaved softly above the open collar of her blue, flannel dress. Apparently, she was oblivious of the advance of the larger boat, until Fenton Cooper's "boat, ahoy," caused her to start and shove her hat back from her pretty, flushed face.

The two boats were soon alongside, and as he laid his hand on the side of the pirogue detainingly, he stooped to look full into her eyes.

"Were you really going to run me down?"

"I did not see you."

But the words were untrue, and Una's eyes dropped suddenly, while a crimson wave swept over her neck, cheeks and brow.

"But you knew I was going away this morning."

"Yes, I knew that—and—and—I am sorry."

He could see the tremble in her sweet, frank eyes, and it made his heart leap for very gladness. Suddenly, Una stood up, making the frail pirogue rock with the impetuosity of her movements. She addressed herself to his oarsman, imperiously:

"Uncle Van, I am going to row Mr. Cooper out to the landing. Get into the pirogue and take it back to the house. Give me your oars. Tell mother not to worry."

The exchange was made, and skiff and pirogue were rapidly drifting apart before Fenton Cooper could enter his feeble and insincere protest against this delightful change of programme.

"I told you an untruth a little while ago," said Una, not looking at him, but busying herself with adjusting her hat so as to hide her eyes from him, "and I want to take it back. I did see you before you hailed me."

"I knew you did. And yet were going to run straight by me."



"WERE YOU REALLY GOING TO RUN ME DOWN?"

have spoiled her at the boarding-school. All this, mentally, while he was rapidly making up his mind that he must really go away without saying good-by to her.

"Tell her, please, how very sorry I was," he said, holding Mr. Upham's hand in a close clasp, as he stepped over the gunwale of the skiff which was to take him out to the landing. "But, I will see you all again—some day."

"She'll be sorry, too," said the old man, kindly. "Una's got no notion of time keeping, but her heart is in the right place."

"I like him, wife, don't you?" the old man asked, looking after the little boat which was bearing Fenton Cooper rapidly out of sight.

"He does very well for a drummer," Mrs. Upham answered, with contemptuous emphasis on the last word, "but I am glad he is gone. Exceedingly glad."

"Una might have showed him a little more respect, considering."

"Una is quite grateful enough, Mr. Upham, for the service rendered her by this young man, but I am happy to observe a certain nice discrimination in her which I had not suspected. She has developed what may be called class instincts, in a manner highly gratifying to me."

"Class fiddlesticks," said Mr. Upham, turning angrily on his heel and going inside. Mrs. Upham followed with slow dignity.

At that identical moment Una's class instincts were being admirably illustrated—her gratitude also.

Once outside the yard fence, behind which the trees stood ankle deep in stagnant water, Fenton Cooper's eyes could range, with unbroken line of vision, over the broad, submerged acres, which were soon to be his very own; a twinkle of amusement flickered in them at the sight.

"If I were to tell them up home about the water, they would think I had been on a fool's errand, sure enough."

were not taking her in at all. He was not even thinking of her, she rashly concluded. Once more the quick red mantled into her sun-browned, smooth cheeks.

"You are glad to get away from it all—this watery prison. Ugh! I don't blame you. How could you endure to spend your whole life here? Wouldn't you rather die?"

"I was not thinking of myself, little girl. I was thinking of you, just then."

"Of me?"

"Yes. I saw you going away from here to be put at a fashionable boarding-school, to be turned into a fashionable young lady. The next time I see you it will be hard to recognize you, child."

Una stared at him in unfeigned bewilderment.

"I don't in the least know what you are talking about. Much chance have I to go to a fashionable boarding-school, or be made a lady of?"

"Would you like to go, Una?"

"Of course, I would."

"What for?"

"To be made into a lady," she said, vehemently; "to have all the roughness and coarseness polished off me. To learn how to talk and walk and read and—and—do everything else like the ladies—you—are going back to, in the city."

"God forbid!" Fenton Cooper ejaculated, earnestly.

Una folded the oars across each other in the rowlocks, and clasping her arms in her hands, she leaned across the slender barricade, her eyes darkening and dilating as she went on rapidly:

"And all this new sort of wishing I have to thank you for. You have showed me that there was a big, bright world outside this orange hedge, where people do things and move and live—really live."

"And really suffer."

She stretched out yearning hands. "Even that is a privilege. Oh, give me the life that is crowded full of doing and daring and suffering, if you will, only—not stagnation. Not death in life."

"It will come to you, child, soon enough—it will all come to you. The living, and the loving and—the suffering. I know it will find you strong and eager. I hope it will leave you just as you are."

"Just as I am! Then you are not my friend."

"Not your friend? My little Una, you don't mean that?"

He held out both hands to her. Across his handsome face there flashed that inexpressibly sweet smile that women, older and more worldly wise than Una Upham might ever hope to become, had found it hard to resist. Una put her two little brown hands fearfully into his. He held her gaze fascinated for a second, while he swiftly decided a tremendous question:

Should he tell her then and there how much of a friend he would like to be to her? Should he take advantage of her innocence and ignorance and blind her, by a promise, to the first man who had ever stirred her emotional young nature to its depths? Or, should he trust the future to chance?

He would leave her as he found her. He would take no unfair advantage of her—such a child as she was!

Her hands were trembling in his like two imprisoned birds. He bent over, suddenly, and kissed each warm, little palm gently and reverently. Then he dropped them:

"I am very much your friend, little Una. So much your friend, that if, when you find yourself growing tired of all the glitter and the tinsel that will dazzle you at first; when you take your rightful place in the world, you should ever think of your drummer friend, or, find yourself in a position where he may be useful to you, I want you to be in a position to find him."

He loosed from his watch-guard a slender, gold ring. It was thin and worn.

"Not much of a trinket," he said, laying it in her palm, "nor is it to be worn after the usual fashion. I leave it with you as a sacred trust. It was my mother's wedding-ring."

"And you are willing to trust me with it?"

Her eyes were shining. Her smooth, white throat throbbled against the open collar of her boating dress.

"I am more than willing to trust you with it. Two years from now, I shall come to you; wherever you are, child, I shall find you. And if, by that time, you have not entirely forgotten this pleasant last hour of ours together, I will have some grave questions to ask you."

"Two years! It is a long, long time!"

"Too short, sometimes, for remembering—too long for enduring."

"I shall remember, and—I shall endure."

She bent over the thin band of gold, but not quickly enough to hide the tears that were shining in her big, blue eyes.

She looked at him, with an adorable bluish mantling all over her lovely face, and suddenly taking a small package from her pocket, she laid it in his hand:

"You asked me for it yesterday, and I said no. Don't look at it until you get on board."

They had reached the landing. The steamer was already lying with its nose against the bank, sighing and puffing laboriously. He was soon on deck, where he stood watching the little skiff, with its blue-robed rower, until the slowly-swinging steamer hid her from view.

Then he loosed the tightly-knotted, pink ribbon about the package in his hand. He knew quite well what it contained. It was the carte he had pledged for the day before. On the back of it she had written, taking infinite pains with her pen:

"From Una Upham to her drummer friend."

CHAPTER IV.

IDA DASHWOOD.

AMONG the women whom one was quite sure of meeting at Mrs. Marie Featherston's high teas, was a Miss Ida Dashwood, a young lady about whom society entertained a variety of opinions.

Mrs. Featherston was Fenton Cooper's sister; a young widow who was a leader in her set and over whom he exercised masculine but loving supervision. Among the few things, however, which even he had not been able to persuade her to give up, was her intimacy with Miss Dashwood, an intimacy which Marie plead for on the score of its long life.

"You know I began liking her, Fenton, when we went to school together. I used to be her defender against the girls. Girls are awfully spiteful to each other, and Ida was so handsome. She needs a defender more than ever now, and I can't drop her."

To oppose this magnanimous sentiment, Fenton could never bring any rational argument. So Miss Dashwood continued to be looked upon as one of Mrs. Featherston's best friends.

Men to whom the "dashing Ida," as a certain set of club men called her, occasionally granted the gracious privilege of smoking an after-dinner cigarette with her, in her own parlors, called her divine, but admitted caudally that she was not at all strait-laced.

Some said that, in view of the fact that her father, a crafty politician, had made use of her talents and beauty to popularize his house, where Ida, since her seventeenth year, had held a salon, she was "remarkably discreet."

The romantic young maiden, in her first season, regarded Miss Dashwood with timid admiration. She was the heroine of so many love stories. They were secretly emulous of her languid air of satiety—it suggested so much delicious experience, you know, and they would gladly have acquired her aplomb, her easy ascendancy in any gathering, at the most sacrificial cost.

Blase men, who had drifted finally into the haven of matrimony, remembering the delightful flirtations they had enjoyed with Ida Dashwood in their untrammelled days, virtuously resolved that, when their daughters grew up, they should be trained in a stricter school.

On one or two points, however, concerning her, there could be no division of opinion: Her superb beauty, almost oriental in its rich redundancy; and her ability to retain her hold upon good society, in spite of the malicious whispers of the women, and the covert innuendoes of the men.

To Marie Featherston, whom she had known ever since their earliest school days, this conspicuous figure clung with a tenacity of affection which was explicable only on the ground of self-interest. She never missed one of Marie's receptions, nor, indeed, did Marie desire that she should.

"It is such a bore, you know, dear, to have to entertain a lot of people by one's self, and you do take to this thing so much more kindly than I ever did. You are indispensable."

Miss Dashwood had come early on this especial occasion. It was the first "at home" Marie had given since her brother's return. Fenton Cooper's presence always materially brightened these receptions, and Miss Dashwood had expended an unusual amount of care upon her toilette. Life retained very few vivid interests for her, but among them—to herself—she acknowledged that Marie's brother must be numbered. She was, as a rule, calmly analytical in all matters pertaining to her own emotions and desires. She was perfectly aware of the fact that no man had ever proven more invulnerable to her charms than this same Fenton Cooper. Hence the piquancy of the pursuit and the zest of the enterprise. She proposed to subjugate him in the end.

"And so your brother really did make his long-talked-of tour through the South, getting back safe and sound, I hope?"

She had kissed Marie effusively, and was now standing before the mirror, shaking out the folds of her green velvet robe, made en train. She was looking her best.

"Yes, he is back, not only safe and sound, but actually so enamored of the country, that he has bought a place! He says we can make it a winter resort. You are looking superb to-night, Ida. That shade of green is so becoming."

"Thanks!" Miss Dashwood turned from the mirror smilingly. "So long as he is enamored of the country only, I presume his friends can survive it."

Evidently, her mind was full of Fenton. No one was more keenly alive to the possibilities of the situation than Fenton Cooper's sister. There had been times when Fenton, in spite of his disapproval of her own intimacy with Ida, had fluttered, mothlike, close enough to this brilliant social luminary to risk a serious scorching. Marie was a wise little woman. She had never warned, advised or threatened. Only—she was not sorry now, of an opportunity to hint at Fenton's absolute freedom from the thrall Ida had sought to hold him in.

"Yes," she said, laughing lightly, "but I am extremely anxious on that score. There is a girl in the case. And such a girl! To hear Fenton tell the story she must be a perfect rara-avis."

"I can well fancy it. All those plantation girls are rara-avis—crude, half-fledged things in sun-bonnets and print gowns. But I really should like to hear your brother's account of his trip. He tells a story so well. I am dying to hear all about it."

She settled herself gracefully upon a divan near the tea-table behind which Marie was to sit. Her quick ear had detected a man's step in the upper hall.

Mrs. Featherston glanced at the clock on the mantel:

"I don't know whether you will hear it this afternoon or not. I had great difficulty in securing Fenton for half an hour even. For some freak, he has purchased this place in Uncle Randolph's name, and there seems to be no end of business between them about this place down yonder. And what do you think, Ida, he staid in the home of those people as a drummer, getting acquainted, he says, with the property?"

"And his rara-avis," said Ida Dashwood, mockingly.

"Yes, I guess so. He says she is shockingly ignorant—"

"I told you so."

"But so sweet and genuine, that she charms one even when most she shocks. He says she is just what her mother calls her, 'a perfect child of nature.'"

"Children of nature, as a rule, are unmitigated nuisances. I doubt if this one will prove any exception to the rule. But here comes our traveler himself. Do come here, Mr. Cooper, and tell me all about it, before any of Marie's herd arrives."

She made room by her side on the divan, and putting out her daintily gloved hand drew Fenton Cooper down beside her with bewitching grace.

"Tell you all about what? Marie, I shall have to ask for my tea before your herd, as Miss Dashwood irreverently calls them, arrives. I am due at Uncle Randolph's in half an hour."

"All about your travels, and your land speculation and your-rara-avis," said Ida, smilingly.

"I suppose you mean Miss Upham, by that. She is a bright, sweet, young thing, with immense possibilities in her. By the way, Marie, do you remember my expressing a hope, that now the purchase was concluded, old Upham would give that pretty child of his the social and educational advantages she was entitled to?"

"Yes. What of it?"

"Well, he is likely to do it with a vengeance. Here is a letter received by Uncle Randolph

this morning. It just shows that old man's tendency to get behind somebody all the time. He wants uncle's advice."

He had taken a handful of envelopes from his side pocket and was running them loosely between his fingers. One of them fluttered noiselessly to the carpet. It was immediately lost to sight in the folds of Ida Dashwood's train as she moved restlessly and assumed an attitude of more eager attention.

"Oh, well, it does not matter. I must have left it in my other coat pocket. It just amounted to an announcement that they, finding themselves unable to entertain the idea of separation from their daughter, had concluded to remove to this city, where they could be near her, while repairing the neglect of a lifetime. Uncle Randolph has just deputed me to find quarters for them. I won't bore you with all the business details. I owe you, Miss Dashwood, an apology for having intruded the subject at all."

"Not at all—not at all. Marie had just told enough to interest me deeply in your child of nature. And so she is about to become a city lady."

"God forbid!"

Both women rewarded this fervent out-break by a rigid silence. Fenton bit his lip in confusion. He had blundered. Ida Dashwood was the first to recover equanimity.

"If the daughter is as confiding and helpless as the papa, I should think she would need a guardian in this naughty place. You know he might fall into the hands of the bunco men."

"Poor child, she undoubtedly will need a guardian. I believe, Marie, I shall advise Uncle Randolph to procure a home for them pretty well up town, on one of the quiet cross streets. I rather think they would all suffocate in a flat or a boarding-house."

"How very much obliged to you they will be for your disinterested kindness," said Ida Dashwood, swaying her large, feather fan slowly to and fro.

There was no trace of sarcasm in her voice, but her large, black eyes had a peculiar glitter in them. Fenton laughed a trifle nervously. For several reasons he was annoyed at this



WITH A PASSIONATE GESTURE SHE FLUNG IT UPON THE CRACKLING FLAMES.

turn the talk had taken. He wondered how it had come about.

"Uncle Randolph will be the happy recipient of all expressions of their gratitude. I do not propose to be known in any of the transactions with Mr. Upham," he said, curtly.

"You are too self-denying by far," said Miss Dashwood, placidly.

He got up to put his empty teacup on the tray. He stood by his sister for a moment, with his hand resting lightly upon her shoulder. He was very proud of her beauty and of her lofty purity.

"I have one request to make of you, Marie."

"And that is?"

"That if Uncle Randolph throws these people in your way, you will be a true friend to this young thing."

"Guide, counselor and friend, Marie."

"Exactly!" Fenton Cooper raised his head proudly. "And, despite the fact that my sister has grown up in the very hot-bed of fashionable frivolity, or, perhaps, because of that fact, she is well fitted to warn and to guide this absolutely ignorant girl."

Miss Dashwood's eyes glittered ominously. She drew her full, red underlip in quickly with her sharp, white teeth.

"Why do you not engage my friendly services?" she asked, pulling a feather out of her handsome fan with nervous fingers.

Cooper looked at her earnestly a second. Her eyes dropped beneath his intense gaze. Then he blundered again:

"Would you—could you, warn her from the vortex—that—"

He stopped in sudden consternation. Where was his championship of Una Upham hurrying him?

"That I am involved in? Don't hesitate to complete your sentence. I am grateful that you did not say, bluntly: 'Because you are not fitted to come in contact with my rara-avis—my white dove from the wild woods of Arkansas.'"

She looked at him smilingly. Her voice was as low and evenly modulated as if she were uttering the veriest commonplace. Fenton Cooper could do nothing but silently curse his own blundering stupidity and gnash his teeth in recognition of the fact that he had secured for Una Upham the enemy of a passionate and influential woman. Mrs. Featherston came feebly to the rescue:

"I suppose Fenton thinks his little rural beauty had better be mastering her three R's, than learning of you, ma belle, how to turn heads and break hearts. Your half hour is up, Fenton, and you know Uncle Randolph is excruciatingly punctual."

He gladly accepted his dismissal, and while

Mrs. Featherston swept forward to receive some new arrivals, he stammeringly patched up a peace with Ida Dashwood. He made his exit by way of the library. As its door closed on him, Miss Dashwood stooped quickly to secure the envelope that had lain hidden by her train, ever since it fell from his hands unnoticed.

She clasped it tightly and in another moment was standing behind the portiere which shut off the alcove at the end of Mrs. Featherston's back parlor, eagerly scanning Una Upham's photograph.

There was a softly-shaded lamp on a table in the alcove. She held the face of the photograph over it until its smooth surface was cracked and blistered and her own fingers hot and scorched, then, with a passionate gesture, she flung it upon the crackling flames of the wood fire. Her beautiful face was dark with jealous wrath.

"I have seen her—and I hate her! Bah, the idea that I, Ida Dashwood, should be insulted for a white and pink thing like that! Infatuated fool that he is. Nevertheless, I propose to assist in the training of this child of nature. Who is to prevent me? And when I am done with her—well—he is welcome to woo her and to win her!"

She stood in front of the fire in the alcove, with her hands clasped before her, and her brows contracted thoughtfully, long after the last remnant of Una's photograph had fluttered up the chimney, a mere bit of black, charred paper.

She could hear people coming and going in Marie's long parlors. She could hear the clatter of spoons and teacups and the confused hum of well-bred voices. She could hear the Featherston's butler announcing each new arrival with pompous distinctness.

It all meant nothing to her. She could hear nothing but Fenton Cooper's scornful rejection of her as a companion for this rustic beauty—could see nothing but a sweet, girlish face, lighted up by a pair of wonderful, wistful, innocent eyes.

Presently, above the monotonous murmur on the other side of the portiere, she heard the butler's voice raised to announce a late comer:

"Mr. Leonard Heywood."

She started. She had been standing with one little, slippered foot resting on the low, brass fender. She moved quickly away in the direction of the long mirror behind her. She took a long, calmly critical survey of herself in the glass, patted a curl or two into more becoming prominence and passed her bared, right hand over her anger-contracted brows.

"Leonard Heywood! The very man for my purposes! He shall assist me in training Fenton Cooper's child of nature. Between us, we will make a woman of her."

In another moment she was back among Marie's guests, the brightest and most brilliant woman in the crowd. And even to those most accustomed to her reckless audacities of word and glance, the bewildering fascinations of her manner that day, which she seemed to exercise with lavish recklessness, was something of a revelation.

(To be continued.)

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Our Household.

"MIDWAY."

There's a pleasant place called "Midway,"
(Tis between our youth and age)
But it takes so long to get there
In our life's old-fashioned stage!
There the streets are broad and shady,
And the rush and noise and glare
That we pass on life's long highway,
Never reach or enter there.

'Tis a place of rest and quiet;
'Tis a place of bliss complete;
But the colored lamps of childhood
Would look strange hung on its street—
Just as strange as would gay posies
Were they on a nun's black gown,
For at "Midway" all the burners
Of the lights are turned half down,
And the light is soft and restful
To the eyes not very strong,
Till it seems unceasing twilights
To this quiet place belong.

There are wondrous birds at "Midway,"
And they sing and sing and sing!
Like the little carrier-pigeons,
Countless messages they bring
From each place that we have passed through
On our long, long journey there,
Where there falls a twilight grayness—
And especially on hair
Of old ladies who sit knitting
Little stockings for the feet
That will sometime in the future
Tread this quiet, old retreat;
Where each day seems like the others
And the twilight never ends!
Where the talks are all of childhood—
When we meet there old-time friends—
Where the feet of little children
Never patter to and fro;
But where steps are slow and measured
And where lights are turned down low.

Often there—when I am knitting—
Needles drop from hands, and lo!
The red ball of yarn has blossomed
As did roses long ago
On a bush where all the roses
Grew as big as apples red!
And my dream is filled with faces
Of the living and the dead,
But the dead are always rosy,
While the living ones are pale;
For the living live at "Midway,"
And the dead at "Far-off-dale."
And in dreams I, too, am dancing
Old-time dances I once knew;
But I wake when some one whispers:
"Look—and she a grandma, too!"

In this place of rest and quiet,
In this place of bliss complete,
Where the colored lamps of childhood
Would look strange hung on its street;
In this quiet place called "Midway,"
Oh, at times my soul doth yearn
For the colored lamps of childhood
That could so much brighter burn!
But I fall in with the marches—
With their measured steps so slow—
In this proper place called "Midway,"
Where the lights are turned down low.

—Mrs. McDermott.

HOME TOPICS.

HOUSEHOLD ECONOMIES.—One of the most important duties of the housekeeper is to "gather up the fragments, that nothing be lost," and at the same time not have these small economies too conspicuous. With a little care, every scrap of stale bread can be made available. All the crusts and small pieces should be spread on a pan and dried slowly in a warm oven, or on the stove shelf is better, as then there is no danger of the bread being forgotten and burned. When the pieces are perfectly dry, put them on the bread-board and roll them until very fine. Put them away in a glass fruit-jar in a dry place. They will keep for months, and can be used for puddings, for breading meats, fish, croquettes, etc., or for thickening soups. I always keep the Graham bread crumbs separate from the white ones, as they are best for puddings and not so good for breading, because they will burn quicker. If you have a quantity of slices of dry bread, dip them quickly, one at a time, in a bowl of cold water and put in one layer on a dripping-pan; set the pan in a hot oven for about ten minutes, when they will be brown and crisp, and should be served at once on a warm plate. Stale rolls or a loaf of stale bread can be made equal to new if sprinkled with a little cold water, put in a deep pan, covered, and set in a moder-

ately hot oven. Ten minutes is long enough for rolls to heat; a loaf will require fifteen minutes, and when cool, will cut like a fresh loaf.

An excellent way to use the fragments of a boiled fish is to take a pint of milk, put into it a tablespoonful of butter, a tablespoonful of corn starch wet with a little cold milk, and lastly, three well-beaten eggs. Remove this sauce from the fire, and put in a pudding-dish, first, a layer of fish and then one of sauce, sprinkling on a little salt and pepper. Alternate the fish and sauce until the dish is full; cover the top with bread crumbs and bake twenty minutes. Serve hot for lunch, breakfast or tea.

Shrunken, half-worn bed-blankets or comforts, past using on a bed, make good pads to put under a stair carpet. They will answer the purpose just as well as the boughten pads, and be a great saving in the wear of the stair carpet.

When table-cloths are worn too much for use as such, the best parts may be cut into table-napkins and will last full long enough to pay for the trouble of making. They make good picnic napkins, or for the children to carry to school. Last week I made two carving-cloths from a partly-worn table-cloth, cutting them with a stripe of the red border on one side and stitching a stripe on the other three sides, mitering the corners and raveling a fringe about an inch in depth all around. When done, starched and ironed, I felt quite proud of them.

White merino underclothing, when past wearing, make excellent wash-rags and cleaning cloths, and nothing makes better holders for either ironing or use about the stove than cast-off woolen hosiery covered with thick drilling. It is a good plan to make the covers for iron-holders of white drilling in the form of a bag, then they can be slipped off and washed when soiled.

PLANS FOR WINTER.—Again has come the time

"When cellar bins are closely stowed,
And garrets bend beneath their load."

The housewife's cupboards are filled with jars of fruit preserves and pickles, jellies and jams, the result of many weary days of work. The children have put away a bounteous supply of pop-corn and nuts, which, with delicious apples, will furnish many a winter evening feast.

A time of rest and recreation has been earned by all. Now is the time to make plans for social and intellectual enjoyment. Let the family consult together and decide upon the papers and magazines needed for the winter's reading. Be sure and get the best, if the number must be less. In some neighborhoods, a magazine club is a good thing, as the magazines can be passed around, and thus each family can have the reading of three or four monthlies for the price of one. A neighborhood literary society has been, in many country neighborhoods, a source of pleasure and profit. I remember one such society that was started by three young girls of fifteen or sixteen years of age, who planned to meet at each other's houses once in two weeks, each prepared with an essay, a story, recitation or music. In a little while the three families were all interested. Then other families were gradually drawn in, until, within a radius of two or three miles, every person, from fathers and mothers to the six-year-olds, was an active member. Afterward, the adult members formed themselves into a Chautauqua Circle. Now, the first members are still reading special courses, and the children, as they grow up, take up the regular course, while the little ones still enliven the meetings with their songs and recitations.

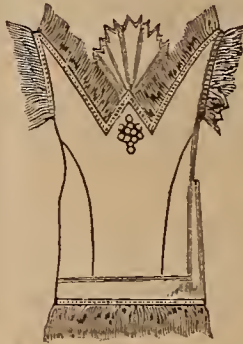
There are no dancing or card parties in that neighborhood; all are too busy for mere aimless amusement. Frequently, a short programme is arranged, followed by games, in which both young and old take part, and a merry evening is spent, but all enjoy the work as well as the play, and the influence of the society started by those three girls—now wives and mothers themselves—cannot be estimated.

MAIDA McL.

Don't Irritate your Lungs with a Stubborn Cough, when a safe and certain remedy can be had in Dr. Jayne's Expectorant.

UNDERWEAR.

If the trimming of underlinen is inclining to greater simplicity, and puffs, tucks and frills are consequently disappearing, this is counterbalanced by greater richness of material. The newest models for chemises are trimmed with broad Valenciennes or fine Swiss embroidery. The top and sleeves are edged by a broad frill, headed with a row of open-work, through which narrow ribbon is run for drawing up the chemise. The deep-cut middle is filled up with a half jabot fastened by a bow. Batiste chemise trimmed with black, Chantilly lace are worn with



TRIMMING FOR UNDERWEAR.

black toilettes. Besides being very becoming, this trimming has the advantage of being allowed to be seen, without, as in the case of white lace and embroidery, looking improperly conspicuous. If the dress be very low, a small, fan-like, gauze trimming can be sewed on the chemise. In all large wedding outfits the chemise and drawers are made to match, the latter, though, of rather stronger material, calico or percale. The newest cut for drawers is hollowed out in front of the leg and allows the knee to be visible from the middle of the double frill of lace or embroidery going round the bottom of the drawers. Underlinen made of figured and colored linen, percale, batiste or calico, all of which are obtainable in charming varieties, must even more closely match all parts of the toilette, even to the petticoat. A simple strip of embroidery is sufficient trimming, with, at most, an insertion for narrow ribbon to run through. The newest colored chemises are sleeveless, and thereby very suitable for ball dresses, which, in their turn, have only ribbon bows as shoulder-straps to tie and untie as the bodice is put on or taken off. And yet, it is specially worthy of remark that this sort of fantastic underclothing is seldom seen in really good outfits, and brides in the best families remain true to



TRIMMING FOR UNDERWEAR.

more or less trimmed white underclothing. We see but a few dotted percale night-dresses, everything else being of dainty white shirting or Nainsook. Embroidered insertion and frills of Valenciennes or Cluny lace, about six inches broad, are always an elegant and useful trimming. The shawl collar is set plain onto the neck, and the front and sleeves are edged with lace. Small tucks mark the waist.

FROM ROCKFORD.

Have any of the sisters tried making rugs out of the old horse-blankets that the men have no use for? I made one a yard and a half long and a yard wide, and with the best of an old, red flannel shirt I "trimmed" it—bound it around with a narrow strip, and cut small blocks or squares and feather-stitched them on with blue cotton. I have eight squares in the center, and it looks very pretty. There seems to be no wear or tear to it. J. K.

GOOD COOKING FOR THE FARMER'S HOUSEHOLD.

SOUPS.

At this season of the year, soup will be found very acceptable to the farmer's household, who are deprived of the luxury of a market where fresh meat and other cool-weather delicacies can be obtained, and if the housekeeper will give the subject a little attention, she will learn to make a variety of different soups from quite a limited stock of material, the seasoning changing the taste and preventing the family from tiring of always having the same kind of soup.

A few items in the preparation of soup must be given attention in order to have it good. In making soup, a porcelain-lined soup-kettle is a great convenience; it should have a close cover to keep in the steam and prevent evaporation. Cold, soft water should always be used, and salt should never be added until the soup is done, as salt has a tendency to harden water. In cool weather it is well to keep soup stock on hand, from which soup can be prepared in a short time.

To make good soup stock, the following will be found excellent:

SOUP STOCK.—Take a shin of beef and cut the meat from the bone, put the latter in the bottom of a kettle, lay the meat on top, pour over a gallon of cold, soft water, and set where it will heat gently for one hour; then place over a good fire, let boil briskly and skin, set back again and pour in a cup of cold water, let boil and skim. Cover closely and let simmer gently for one hour, then add one onion, one carrot, one turnip, one sprig of parsley and one stalk of celery; let cook slowly an hour longer. Season with salt and spices to taste, strain and set in a cool place. When cold, take off the grease, and it is ready for use.

VEGETABLE SOUP.—Put a quart of boiling water in a kettle, cut up one carrot, one turnip, one sweet potato, one Irish potato and one parsnip. Put on to boil; when done, add a cupful of rice, stock to flavor, with salt and pepper. Let come to a boil and serve.

MUTTON SOUP.—Take six pounds of the neck of mutton, put in a soup-kettle, cover with four quarts of water, bring slowly to a boil, skim carefully, cover and let simmer gently for four hours. Strain and stand away to cool. Skim off the fat. Put the soup in a kettle, add an onion, bay leaf and half a cup of rice.

NOODLE SOUP.—Clean a large chicken, put it into a soup-kettle with three quarts of cold water, stand on a moderate fire and bring to a boil. Skim carefully. Let simmer gently two hours; then add one sliced onion, a sprig of parsley and four ounces of noodles, simmer one hour longer, season. Serve the soup hot. Dish the chicken and serve with egg sauce.

BEEF SOUP.—Put a shin of beef in a soup-kettle, add five quarts of water, place over a moderate fire, let boil and skim. Let simmer gently for four hours. Take out the beef bone. Skim all the fat from the soup. Chop one turnip, one onion, one head of celery, one parsnip, one carrot, one teacup of cabbage and one Irish potato; add to the soup. Let cook one hour longer. Season to taste.

BEAN SOUP.—Put a quart of beans to soak over night. In the morning, put to boil in water sufficient to cover, drain and put on a gallon of cold water, and half a pound of salt pork. Boil slowly for three hours, season with pepper and salt. Strain and serve with sliced lemon.

MULLIGATAWNY SOUP.—Take cold chicken, turkey, beef or veal, and put in a soup-kettle with a gallon of water. Cut fine four stalks of celery, two onions and one carrot; fry in butter and put in the soup. Stir four ounces of flour in the skillet from which the vegetables were taken until brown, add to the soup. Let cook gently for four hours, season with salt and pepper, strain, and return to the pot, add the meat, free of bones, with a teacup of rice. Simmer half an hour longer and serve.

OX-TAIL SOUP.—Wash and wipe an ox-

tail, cut in pieces. Put a tablespoonful of butter in a frying-pan. When hot, put in the ox-tail, let brown and take out, put in a soup-kettle, with one onion, one turnip, one carrot, half a dozen cloves and two quarts of cold water. Simmer two hours. Take the vegetables out, season with salt and pepper.

TOMATO SOUP.—To two quarts of beef stock add a quart can of tomatoes and boil half an hour. Strain, season with salt and pepper.

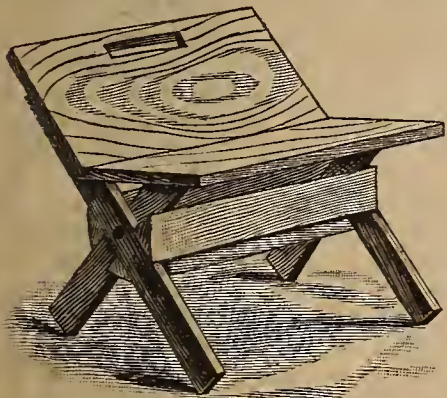
POTATO SOUP.—Boil half a dozen potatoes, mash, strain into a soup-kettle with two quarts of sweet milk, add an ounce of butter and two tablespoonfuls of finely-chopped parsley. Let boil, break in half a dozen crackers, season with salt and pepper, and serve.

MOCK TURTLE SOUP.—Take half a calf's head and remove the brains and skin, wash and soak in salt water. When ready to make the soup, put in a soup-kettle with two quarts of cold water and one of soup stock. Let boil two hours, skim carefully. Take up the head, remove the bones and cut the meat in pieces. Fry one onion in butter, to which add a teaspoonful of sugar, and put in the soup, let simmer, add one carrot, one small turnip, one cupful of chopped cabbage, a few sprigs of parsley, half a dozen heads of celery, a small bunch of sweet herbs, the grated rind of a lemon, half a pod of red pepper and a little salt. Let simmer gently for one hour, strain, add the meat with half a pint of grated bread crumbs and cook ten minutes longer. When ready to serve, add a tablespoonful of walnut catsup and a sliced lemon.

GIBLET SOUP.—Take two sets of chicken giblets, cut up and fry in butter. Chop one onion, one carrot and a sprig of parsley, fry in the hot butter, put with the giblets in the soup-kettle with a quart of cold water and a pint of soup stock. Let simmer slowly for two hours. Stir three ounces of flour in the frying-pan until smooth and strain into the soup. Take out the giblets, chop fine, put in the soup-tureen with the yolks of six hard-boiled eggs, season the soup with salt and pepper, and pour over the giblets and serve.

A WIRE-SPOOL SEAT.

A wire-spool can be twisted into a very pretty rustic seat by knocking off one of the sticks that forms the spool. Then saw off one section of the cross on each side, as shown in the cut. Saw two boards, one for the seat and one for the back. Let the



WIRE-SPOOL SEAT.

boards project over the end of each cross about two inches. Use planed boards and paint them, and you will have a very pretty and useful seat for the lawn or porch.—*Farm and Home.*

APPLE-LEAF LACE.

Cast on 30 stitches, knit across.

First row—Slip 1, knit 2, over, narrow, over, narrow, purl 2, knit 1, over, knit 1, over, purl 2, knit 1, over, narrow, over, narrow, knit 1, over twice, narrow, knit 7, over twice, purl 2 together.

Second row—Put the needle under the thread, over twice, purl 2 together, knit 9, purl 1, knit 1, purl 5, knit 2, purl 5, knit 2, purl 6.

Third row—Slip 1, knit 1, over, narrow, over, narrow, purl 2, knit 2, over, knit 1, over, knit 2, purl 2, knit 1, over, narrow, over, narrow, knit rest plain except 2, over twice, purl 2 together.

Fourth row—Put needle under thread, over twice, purl 2 together, knit 11, purl 5, knit 2, purl 7, knit 2, purl 6.

Fifth row—Slip 1, knit 1, over, narrow, over, narrow, purl 2, knit 3, over, knit 1, over, knit 3, purl 2, knit 1, over, narrow,

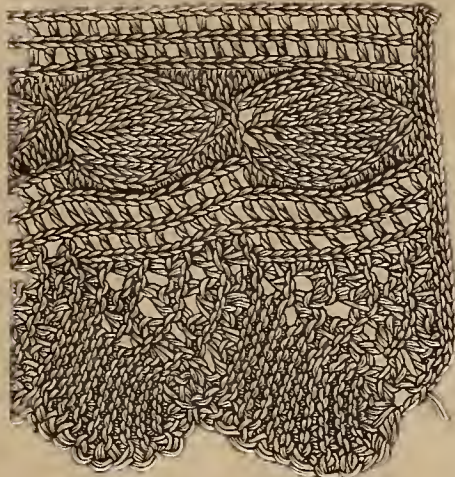
over, narrow, knit 1, over twice, narrow, over twice, narrow, rest plain except 2, over twice, purl 2 together.

Sixth row—Put needle under thread, over twice, purl 2 together, knit 8, purl 1, knit 2, purl 1, knit 1, purl 5, knit 2, purl 9, knit 2, purl 6.

Seventh row—Slip 1, knit 1, over, narrow, over, narrow, purl 2, knit 4, over, knit 1, over, knit 4, purl 2, knit 1, over, narrow, over, narrow, knit rest plain except 2, over twice, purl 2 together.

Eighth row—Put needle under thread, over twice, purl 2 together, knit 13, purl 5, knit 2, purl 11, knit 2, purl 6.

Ninth row—Slip 1, knit 1, over, narrow, over, narrow, purl 2, knit 11, purl 2, knit 1, over, narrow, over, narrow, knit 1, over



APPLE-LEAF LACE.

twice, narrow, over twice, narrow, over twice, narrow, rest plain except 2, over twice, purl 2 together.

Tenth row—Put needle under thread, over twice, purl 2 together, knit 8, purl 1, knit 2, purl 1, knit 2, purl 1, knit 1, purl 5, knit 2, purl 11, knit 2, purl 6.

Eleventh row—Slip 1, knit 1, over, narrow, over, narrow, purl 2, slip 1, knit 1, turn the one slipped over the one knit, knit 7, narrow, purl 2, knit 1, over, narrow, over, narrow, knit rest plain except 2, purl 2 together.

Twelfth row—Put needle under thread, over twice, purl 2 together, knit 16, purl 5, knit 2, purl 9, knit 2, purl 6.

Thirteenth row—Slip 1, knit 1, over, narrow, over, narrow, purl 2, slip 1, knit 1, turn slip over knit stitch, knit 5, narrow, purl 2, knit 1, over, narrow, over, narrow, knit 1, over twice, narrow, over twice, narrow, over twice, narrow, rest plain except 2, over twice, purl 2 together.

Fourteenth row—Put needle under thread, over twice, purl 2 together, knit 9, purl 1, knit 2, purl 1, knit 2, purl 1, knit 2, purl 1, knit 1, purl 5, knit 2, purl 7, knit 2, purl 6.

Fifteenth row—Slip 1, knit 1, over, narrow, over, narrow, purl 2, slip 1, knit 1, turn slip over knit stitch, knit 3, narrow, purl 2, knit 1, over, narrow, over, narrow, rest plain except 2, over twice, purl 2 together.

Sixteenth row—Put needle under thread, over twice, purl 2 together, knit 20, purl 5, knit 2, purl 5, knit 2, purl 6.

Seventeenth row—Slip 1, knit 1, over, narrow, over, narrow, purl 2, slip 1, knit 1, turn slip over knit stitch, knit 1, narrow, purl 2, knit 1, over, narrow, over, narrow, knit 1, over twice, narrow, over twice, narrow, over twice, narrow, rest plain except 2, over twice, purl 2 together.

Eighteenth row—Put needle under thread, over twice, purl 2 together, knit 11, purl 1, knit 2, purl 1, knit 2, purl 1, knit 2, purl 1, knit 2, purl 1, knit 1, purl 5, knit 2, purl 3, knit 2, purl 6.

Nineteenth row—Slip 1, knit 1, over, narrow, over, narrow, purl 2, knit 3 together, purl 2, knit 1, over, narrow, over, narrow, rest plain except 2, over twice, purl 2 together.

Twentieth row—Put needle under thread, over twice, purl 2 together, knit until there are 29 stitches on the left needle, turn all the stitches on the right needle over one, knit 13, purl 5, knit 5, purl 6.

Purl means knit backward; purl 2 together means narrow backward.

Meade county, Kan. Mrs. J. E. R.

BEECHAM'S PILLS cure bilious and nervous ills.

CAKE RECIPES.

As the days of high-priced eggs are upon us, and sugar is also above par, perhaps a few cheap cake recipes would be acceptable to some of the farmers' wives.

SPONGE CAKE.—Two eggs beaten with one cup of sugar, then sift in one and one half cups of flour, to which has been added one teaspoonful of soda, two teaspoonfuls of cream of tartar and one half teaspoonful of salt; then add one half cup of thin, sweet cream, and beat thoroughly. Bake in long, flat tins, or jelly-tins, as this recipe makes good layer cake for jelly, chocolate or cream custard. The latter filling is made by using one pint of sweet milk, two tablespoonfuls of sugar, one tablespoonful of butter, let boil, then add two tablespoonfuls of corn starch dissolved in a little cold milk. Lemon or vanilla flavoring.

Another good recipe is one cup of sugar, three cups of flour, one teaspoonful of soda, one teaspoonful of cream of tartar, one teaspoonful of salt, sift together three times; then work in two tablespoonfuls of butter with the hand as you would pie crust. Last, add one full cup of sweet milk with any desired seasoning, and beat thoroughly until the batter looks smooth and creamy. This makes a good-sized loaf.

I sometimes use this recipe for layer cake by changing to two and a half cups of flour and one tablespoonful of butter instead of those given in the recipe. With a lemon frosting between the layers, it is delicious—so white and tender.

LEMON FROSTING.—Grate the yellow part of the lemon, take off the white skin (it is bitter), finish grating the lemon; to this add two thirds of a cup of sugar and the beaten white of one egg. Beat together and use between the layers of cake.

One great secret of nice cake making is the thorough beating of the batter after all ingredients are together. Some have trouble with granulated sugar. Don't use so much. One half inch less for a cupful is enough. The cake batter takes longer beating than usual, as the sugar is longer in dissolving. We think it the cheapest sugar on the market. TORSY.

CLOTHES POUNDER.

Take an old broom-handle and go to your tinsmith and get him to make a funnel, with two strips of tin crossing each other at the larger end, and attach the smaller end to the handle, and you will have a good pounder to take the dirt out of clothes. Do not have any holes in the tin, as it is a suction pounder. It will cost about thirty cents. OLD READER.



LETTER FROM OKLAHOMA.

I have been a subscriber to your excellent paper a number of years, and would like to thank the sisters, through the FARM AND FIRESIDE, for some of their valuable hints and recipes that I have enjoyed the benefit of. When reading the contributions of some of them, I feel like they were old friends. We are always glad to get a new number, and doubly so since coming to Oklahoma. I wonder if there are any other of the sisters away down here? We are well pleased with our location, and think this is a beautiful country. It well deserves all the praise given it. We are five and one half miles from Oklahoma City. They claim a population of six thousand and still the people keep coming. They are already agitating the questions of electric lights, street-cars and waterworks. Quite a good many that returned home after getting their locations filed on, are now coming back with their families, and little cottages are springing up on the prairies as if we were living in the days of fairies.

There is a railroad station one and one fourth miles from us that will make a nice little village after awhile.

This is not like most new countries. One can live here as cheap as in most cities where everything they consume has to be bought. Owing to the

lateness of admitting settlers, there will be but little raised this year. A few have been fortunate enough to get some corn planted on breaking. It has done well, considering how late it was planted.

MRS. E. B.

RECIPES.

As I have taken the FARM AND FIRESIDE for nearly nine years, and have got so much benefit from it, I thought I would add my mite. I found out long ago that I could not get along without the FARM AND FIRESIDE, and it is such a good way for the ladies to help one another, so I will tell the sisters of a splendid recipe for constipation. I can vouch for it, as several ladies besides myself have used it with best results.

½ pound best prunes,
¼ pound best dates,
¼ pound figs,
5 cents' worth senna.

Chop all up fine, then mix the senna with water and mix all well together.

Dose, ½ teaspoon every night.

AUNT TOOT.

SPICE CAKE.

2 cups of brown sugar,
Scant ½ cup butter,
2½ cups flour,
1 cup sour milk,
2 eggs (1 white, 2 yolks),
1 teaspoonful soda,
1 teaspoonful allspice,
2 teaspoonfuls cinnamon,
½ teaspoonful cloves,
½ nutmeg.

Frosting—

1 cup white sugar,
4 tablespoonfuls water.

Boil five minutes, pour over the beaten white of one egg and add one cup of chopped raisins.

MRS. M. F. N.

TO DESTROY FLEAS.

Some little time ago some one sent in to ask for a remedy against fleas. We have kept the matter in mind but only have just heard of a reasonable remedy.

Take one pound of copperas and eight ounces of crude carbolic acid, dissolve in a gallon of water. Sprinkle the places infested with it and it will effectually drive them away.

It is inexpensive, also, costing about ten cents, and can also be used as a disinfectant.—ED.

MEAT PIE CRUST.

I wonder if any of the household sisters make batter crust for meat and larger fruit pies?

We make it with baking-powder, as biscuits are made, but as thin as pan-cake batter; pour a thin layer in the pan, put in the meat or fruit, then pour the remaining batter over the top. It is excellent for meat pies.

SHARLOT.

OMELETTE.

Mix smooth with milk one heaping tablespoonful of flour. Beat six eggs very light, mix with the flour, add fourteen tablespoonfuls of milk, flavored with nutmeg, a pinch of salt, a pinch of sugar; put a tablespoonful of butter in the skillet, let it melt, then pour in the mixture, set in a hot oven till brown.

Memphis, Tenn.

PROF. H. L.

EYE-WATER.

Break three eggs into one quart of clear rain-water, stir, let boil, then add one half ounce of sugar of lead, stir a few minutes, set off to cool.

The curd, bound on the eye at night, will draw out all inflammation and soreness. The liquid on top is the best eye-water ever made.

W. H. S.

QUERY.

LEMON EXTRACT.—Can Mrs. L. D. Baldwin, who sent the recipe for vanilla extract, send one for lemon also?—ED.

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Our Sunday Afternoon.

THE COMING OF HIS FEET.

IN the crimson of the morning, in the whiteness of the noon,
In the amber glory of the day's retreat,
In the midnight, robed in darkness, or
the gleaming of the moon,
I listen for the coming of His feet.
I heard His weary footsteps on the sands of
Galilee,
On the temple's marble pavement, on the
street,
Worn with weight of sorrow, faltering up the
slopes of Calvary
The sorrow of the coming of His feet.
Down the minster-aisles of splendor, from be-
twixt the cherubim,
Through the wondering throng, with motion
strong and fleet,
Sounds His victor tread, approaching with a
music far and dim—
The music of the coming of His feet.
Sandaled not with shoon of silver, girdled not
with woven gold,
Weighted not with shimmering gems and
odors sweet,
But white-winged and shod with glory in the
Tabor-light of old—
The glory of the coming of His feet.
He is coming, O my spirit! with His everlast-
ing peace,
With His blessedness immortal and com-
plete.
He is coming, O my spirit! and His coming
brings release,
I listen for the coming of His feet.

PURE RELIGION.

HERE is a great deal in this world that passes for religion, that falls far short of meeting the high and noble sphere which that word in its best and truest sense implies. Religion not only denotes the influence and motives to human duty which are found in the character and will of God, but, when possessed in the soul, leads to the performance of that duty. Pure religion will not manifest itself merely in the holding of a theory, nor even in the punctilious observance of certain church rites. It will show itself in acts of kindness, words of sympathy and deeds of love. Such are the best recommendations to the genuineness of the religion of any man.

The burden of heralding to the world a special message, or of promoting a much-needed reform, should not be thought an excuse for neglecting to perform labors of love and Christian charity, and for not lending a helping hand in time of sorrow and need. Christ came to this earth on the greatest of all missions—the salvation of mankind. But the sick and distressed he never passed by unnoticed. His life was full of deeds of love and mercy.

Good deeds can never be separated from genuine religion. Faith without works is dead. Living faith works, and works by love. A heart full of love to God cannot overlook the slightest of his creatures. To ignore the creature is to insult the Creator. "Pure religion and undefiled before God and the Father is this: To visit the fatherless and widows in their affliction, and to keep himself unspotted from the world."

BILL OF FARE.

The missionaries do not always have the daintiest menu as they sit down to dine. Missionary Walker, describing his bill of fare in Central Africa, says he occasionally has white ants as a delicacy, and likes them very much, though it takes some time to get over the feeling of repugnance which ants at first excite as an article of diet. There is nothing like getting used to things.

Dr. Junker found that, after awhile, he could eat fried ants with as much relish as any of the natives, and explorers on the Congo have not objected to an occasional hippopotamus steak, when stewed goat and boiled chicken have failed to give sufficient variety to the canned meats of civilization.

An orchid collector, who is enriched the hot-houses of Erastus Corning and other horticulturists, avers that stewed monkey isn't so very bad, at least on the upper Amazon. One dish, however, that he found an eminent explorer awhile ago much for him, and he unconsciously surrendered. It was De Brazza, down very hungry one day to have dinner on the banks of the

Ogowe. He thought he was eating fish, and a very palatable dish it seemed, until he was told by the delighted lady cook whom he was complimenting, that it was snake. The information ruined his appetite.

The missionary, by the way, has abundant cause for thanksgiving, and no doubt has his Thanksgiving dinner. But what foreign missionary dines off roast turkey? Their number can be written by a 0.—*The Christian at Work.*

CONVERSATION.

A talent for conversation has an extraordinary value for common, every-day life. Any one who has the gift enters in a social circle anywhere. How every one's face brightens at his entrance! How soon he sets all the little wheels in motion, encouraging the resources of the reserved and shy, subsidizing the facile, and making everybody glad and happy!

To converse well is not to engross the conversation. It is not to do all the talking. It is not necessary to talk with very great brilliancy. A man may talk with such surpassing power and splendor as to awe the rest of the company into silence, or excite their envy, and so produce a chill where his aim should be to produce heat and sunshine. He should seek the art of making others feel quite at home with him, so that, no matter how great may be his attainments or reputation, or how small may be theirs, they find it just as natural and pleasant talking to him as hearing him talk. The talent for conversation, indeed, more than anything else in life, requires tact and discretion. It requires one to have more varied knowledge, and to have it at instant and absolute disposal, so that he can use just as much or just as little as the occasion demands. It requires the ability to pass instantly and with ease from the playful to the serious, from books to men, and from the mere phrase of courtesy to the expression of sentiment and passion.

THE GREAT DEMANDS OF THE GOSPEL.

If the King's business requires haste, there are ready facilities to meet the requirement. Sanctified scholarship is another royal courier, prepared to mount the swift steeds of modern civilization, and bear the divine tidings to every nation in its own native tongue. When Christ gave his command, he addressed humble, unlettered men. Since then the gospel has found its way into Caesar's household. Here are the princes of this world, the seers and sages, bowing at the cross. The Bible has been translated into over three hundred languages and dialects. A Christian literature has been created, and may be reproduced in any known language of the earth. Steam has been harnessed to the gospel chariot—nay, even lightning waits to do the church's bidding. What are we waiting for? Twenty thousand millions of dollars lie in the coffers of the Protestant church members of Great Britain and America; three thousand young men and women are knocking at the doors of the church asking to be sent abroad; the whole world permits and invites missionary approach; there is every preparation for such universal movement and such rapid progress as no other century ever forecast. What is the church of Christ waiting for?—*Dr. A. T. Pierson.*

PRAYER IN THE MORNING.

As the Oriental traveler sets out for the sultry journey over burning sands by loading up his camel under the palm-tree's shade, and fills his water-flasks from the crystal fountain which sparkles at its roots, so does Christ's pilgrim draw his morning supplies from the exhaustless spring. Morning is the golden hour for prayer and praise. The mind is fresh; the mercies of the night and the new resurrection of the dawn both prompt a devout soul to thankfulness. The buoyant heart takes its earliest flight, like the lark, towards the gates of heaven. One of the finest touches in Bunyan's immortal allegory is his description of Christian in the chamber of Peace, "who awoke and sang," while his window looked out to the sun rising. If ever the stony statue of heathen Memnon made music when the first rays of the dawn kindled on its flinty brow, surely no Christian heart should be dumb when God causes the outgoings of the morning to rejoice.—*T. L. Cuyler.*

Watch these columns next month for a Voice from Pennsylvania.



Portrait of Goodwin.

On account of a forced manufacture of 125,000 ten dollar Photograph Albums are to be sold to the people for \$2 each. Bound in Royal Crimson Silk Velvet Plush. Charmingly decorated inside. Handsomest albums in the world. Largest size. Greatest bargains ever known. Agents wanted. Liberal terms. Big money for agents. Any one can become a successful agent. Sells itself on sight—little or no talking necessary. Wherever shown, every one wants to purchase. Agents take hundreds and thousands of orders with rapidity never before known. Great profits await every worker. Agents are making fortunes. Ladies make as much as men. You, reader, can do as well as any one. Full information and terms free, together with particulars and terms for our Family Bibles, Books and Periodicals. Better write us at once and see for yourself. After you know all, should you conclude to go no further, why no harm is done. Address, ALLEN & CO., Augusta, Maine.



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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Old Coins.—K. B. Callensburg, Pa. Send stamp for catalogue of valuable old coins to Wm. P. Brown, 114 Nassau street, New York.

Silk Culture.—J. D. Red Bank Furace, Pa. For pamphlet on silk culture, write to the Secretary of Agriculture, Washington, D. C.

Mowers, Where Made.—W. C. B., Mound, Ala. The Buckeye mower is made by Aultman, Miller & Co., Canton, Ohio, and the Walter A. Wood mower by the Walter A. Wood Mowing and Reaping Company, Hoosick Falls, N. Y.

Tomato Catsup.—J. T. B., of Minetto, N. Y., writes: "Could the manufacture of tomato catsup be made profitable if tomatoes were to be had for sixty cents per bushel or less? Could a wholesale market be found at a remunerative price?"

REPLY BY JOSEPH:—I am inclined to answer both questions in the negative. If you have no home demand at a very good price, it does not seem to me that you can make anything at it; neither would I advise you to make much calculation on a distant city market. The great catsup manufacturers in New Jersey and elsewhere buy their tomatoes at about 22 or 23 cents per bushel, and you could hardly compete with them if you had to pay 60 cents per bushel.

Willows on Overflowed Lands.—A. S., Alexandria, Va., in reply to V. C., of Williamsport, Md., who desires information about willows on overflowed land, writes: "Willows do very well on such land, provided the water does not stand long. Drift injures willows very much, and it is disagreeable work cutting them when covered with rubbish. A coarse-growing sort, like the American green, does not suffer as much as a finer variety, like the Welch. These two are the most profitable kinds grown here. Under good culture the former will yield about two tons per acre, the latter about one ton per acre. Welch willows have suffered much the present season, where the water stood on the land over three days to a depth varying from three to five feet, while they were small. The yield will be but half the average on such land."

Potato Scab.—F. W., of Falkenberg, Ontario, asks about the cause of scab on potatoes. In spite of all that has been written on this subject in recent years, and all the investigations that have been made, we can only answer that we do not know. Some say scab is caused by an excess of moisture in the soil; others attribute it, first to injury or irritation of the skin of the tubers, and subsequent ingress of fungus spores, etc. In our experience, scab has usually followed heavy application of muriate of potash, and also of wood ashes. Yet, after all, we have no theory, and will not attempt to explain the mystery. In the particular case of F. W., we would prescribe, first of all, a change of location of patch. It will not do to continue planting potatoes year after year on the same piece of land, although it often happens that a crop of perfectly healthy tubers is grown on the same land the year after it had borne a scabby crop.

Cotton-Seed Hull Ashes and Acid Phosphate.—M. C. P., of Enterprise, Miss., writes: "What commercial fertilizer should be used, and in what quantity per acre, for peas, beans, potatoes and tomatoes? Soil, sandy loam, not very fertile. Cotton-seed meal, cotton-seed, hull ashes and acid phosphate are easiest obtained and cheapest in our market."

REPLY BY JOSEPH:—The crops you speak of are especially benefited by applications of the mineral elements of plant food, and as long as you have easy access to cotton-seed hull ashes and acid phosphate, or can buy them to better advantage in your market than other fertilizers, you have a "bonanza." Cotton-seed hull ashes are one of the very best sources of potash, and generally the very cheapest, while acid phosphate is good enough as a source of phosphoric acid. I have several inquiries about the value of cotton-seed hull ashes, and will only say that its composition and value will be given in one of the next articles on agricultural chemistry.

Improving the Farm.—W. S. G., of East Union, Ohio, writes: "How can I improve a place by the use of clover and manure? What manure is best to use? Should I sow large or small clover? Should manure be applied to corn in the drill or broadcast? How deep should I plow?"

REPLY BY JOSEPH:—General rules can here only be given. Adopt a thorough system of rotation. Apply all the manure you can get, and just such as you can get the cheapest. To improve land run down by clover and commercial fertilizers only, apply phosphate (dissolved bone, or even floats) and kainit or muriate of potash, or still better, wood ashes, if they can be had cheap, and sow the large clover. Mow this or pasture it down a year, and next spring, after it has made some growth, plow it down and plant corn or potatoes. Apply the manure for corn broadcast, for potatoes partly broadcast and partly in the drills. Stick to this system of manuring and rotation, and don't attempt to raise crops from utterly exhausted soil without feeding it properly. Some farmers, knowing they can raise only small crops on their poor soil, try to make up for this by planting a very large area. This is wrong—utterly wrong—in principle. Concentrate your efforts on a small space, and raise on one acre what you otherwise would on five. Study the manure question.

Tomatoes for Market.—F. M. McD., East Bloomfield, N. Y., asks: "Where can I get the most reliable book on tomato culture? How can I best dispose of the crop, as I am a good way from the city and from canning establishments?"

REPLY BY JOSEPH:—Instructions on tomato culture are to be found in Peter Henderson's "Gardening for Profit," and in other popular books on gardening. The instructions on the subject, in a larger work by myself, now in the hands of the printers and soon to be issued, are perhaps more explicit than those in any other work with which I am acquainted. If any one desires to sell in large city markets or to canneries, he must be prepared to accept a rather low figure, since tomatoes can be, and are, raised so easily in field culture, that can-

neries can get all they want at from \$7 to \$8 per ton, or about 22 to 25 cents per bushel. The red sorts are the only ones wanted. Acme, Dwarf Champion, and Potato Leaf, as fine sorts as they are, will not do for the canning factories, although they find ready sale among city consumers. I am a little in doubt whether our East Bloomfield friend would find much profit in tomatoes for distant city market or canning establishments; but I have positive information that tomatoes in some of the smaller towns in our correspondent's own county are usually in good demand at \$1 or more per bushel.

Silo in Southern California.—G. H., Los Angeles, Cal., writes: "I came here about sixteen years ago, and took a ranch of eighty acres. Finding this too much for one man to handle, I reduced it to fifteen acres, five in fruit, the balance in barley (for hay), corn and pasture. If we sow barley in December, it will be ready to cut for hay the last of April. Now, if we could put it into a silo and then plant to corn, we could have the corn ready for the silo in September or October, and that would divide our work very much the year around. But I find to cure the barley in April or May sufficiently for hay for stock is very difficult, on account of rain and fogs; so that our corn crop often is too late and runs us into the dry season, and we do not get a good stand of corn. But if green barley, put into a silo, will be as good for cows, horses and pigs, it will be a good thing for us. Some alfalfa could be mixed with the barley, and also with the corn. Sorghum does equally as well as corn. Thus, we could fill in April with barley and alfalfa, and in October with corn, sorghum and alfalfa."

REPLY:—We know of no reason why a silo would not be a success with you. If there are any in use in your county, go and see them, by all means. If not, and you are to be the pioneer in this line, build a good but inexpensive silo. Send 25 cents to this office for Prof. A. J. Cook's "Silos and Ensilage."

Mending Rubber Boots.—A. H. H., Peoria, Ill. The following recipe for rubber cement is taken from the New York Independent: "Procure from a depot of rubber goods, or from a large store where such goods are found, a piece of virgin India-rubber. With a wet knife cut from it the thinnest shavings possible; with a pair of sharp shears divide the shavings into fine shreds. Fill a wide-mouthed bottle about one tenth full of the shredded rubber. With pure benzine, guiltless of oil, fill the bottle three fourths full. The rubber in a moment will perceptibly swell. If the benzine is a good article. If frequently shaken, the contents of the bottle, in a few days, will be of the consistency of honey. Should there be clots of undissolved rubber through it, add more benzine; if it be thin and watery, a moiety of rubber is needed. The unvulcanized rubber may sometimes be found at the druggist's. A pint of cement may be made from a piece of solid native rubber the size of a large hickory nut; this quantity will last a family a long time, and will be found invaluable. Three coats of it will unite, with great firmness, broken places in shoes, refractory patches and soles on rubbers; will fasten backs on books, rips in upholstery, and will render itself generally useful to the ingenious housewife, as it will dry in a very few minutes. It forms an admirable air and water-tight cement for bottles, by simply corking them and immersing the stoppers in it."

Squash-Vine Borer and Melon Caterpillar.—H. M. M., of Blauvelt, Pa., asks: "What is the cause of my Hubbard squash vines dying before the squashes are ripe? In the largest Hubbard we found a worm or grub near the stem. What is the remedy?"

REPLY BY JOSEPH:—Your vines may have been affected by the fungus disease, which, in recent years, has become so prevalent, and is proving so fatal to all sorts of vines. I mistrust, however, that the cause of the trouble is more likely no other than the squash-vine borer, which tunnels through the stem near the root, and often entirely destroys all communication between top and root, so that the vines die. The remedy is to cut out the grub before all the mischief is done, and to cover the first joints of the plant, early in the season, with fresh soil, packing it firmly, in order to induce the vine to strike roots there, and obtain a new connection with the ground. The grub found in the specimen of Hubbard squash might have been, and probably was, the melon-caterpillar, which is about 1½ inches long, translucent, yellowish-green in color, and with a few scattered hairs over its body. They feed on the leaves, and frequently eat into melons, cucumbers, pumpkins, etc. This worm is the offspring of a beautiful moth; wings pearly-white, bordered with black, measuring about one inch across the expanded wings. While the melons and pumpkins are yet young, the worms, should they appear on the leaves, can be destroyed by sprinkling the plants with a solution of white hellebore, one ounce to two galls of water. Strong tobacco tea may also be used with good effect. This is on Saunders's authority.

Johnson Grass.—G. C. C., Lorraine, Tenn., writes: "In answer to Mr. V. C., Williamsport, Md., I would say that the best crop he could put in his overflowed land would be Johnson grass. I herewith send you the following article on Johnson grass, furnished by me to the Cincinnati Commercial-Gazette, which, I think, would interest a good many of your readers: 'The Johnson grass, while differing from other grasses, is superior, being of the sorghum family, which, like cane, has large, wide leaves that make excellent forage, being rich in sugar. It is a rapid grower, coming early in the spring. After it is once well set, it grows until it is cut down by frost. It withstands drouth better than any other, because it has long, cane-like roots, which penetrate deeply for moisture, filling the ground with radicles. These, near the surface, decay, and thereby enrich the soil rather than exhaust it. It will grow on any land that will produce corn, and upon rich alluvial soils it will yield from five to ten tons of hay per annum, and may be cut from two to six times, owing to location. To prepare the land for sowing it, the ground should be broken up by a thorough plowing, with repeated harrowings, until not a clod remains and a fine seed-bed is obtained. We sow of the extra cleaned Johnson grass one bushel, and of the uncleaned, two bushels per acre. A liberal seeding will usually grow a crop that will cover the ground, so there may be less room for the weeds, and the stalks can grow up fine and tender, making the choicest of meadow and pasture. A thin seeding will produce coarse stalks, which stock do not relish. After the seed is sown, go over it with a light brush harrow, and then roll; or better still, sow it before a good rain. One fourth of an inch is deep enough, and every seed will come up. The best time in which to sow it is from July until October 15, but not later. The warm rains in the latter part of summer and

fall cause a rapid growth, so by the time frost comes the grass is in good condition for winter. This Johnson grass makes the best hay if cut when it comes in bloom. The grass cut in the morning can be put into cocks before night. After a day or two it is sufficiently cured to haul into the barn or to the stack. The greener it can be housed after being cut the better. Another advantage this grass possesses, it cannot be drowned out. If once set, it grows indefinitely, year after year, without reseeding, and consequently I think it will grow anywhere; of course, the better the land the better the grass. Before sowing the seed, throw them into a pile on the floor or ground and pour water over them, turning often so they may not heat, until all are wet. When they are swelled, ready to burst, sow them."

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 35 King Avenue, Columbus, Ohio.

Luxation of the Patella.—A. F. R., South Edmeston, New York. Continue the treatment of your veterinarian, but after the patella or knee-pan has been restored to its place, keep the animal tied so that the same cannot lie down. See answer to similar question in this issue.

Sores on the Feet.—D. O. L., New Pittsburgh, Ohio. Keep your cows out of the mud, and out of water pools, etc., clean their feet with a horse-brush, and then apply to the sores and cracks, two or three times a day, a mixture composed of liquid subacetate of lead, one part, and olive oil, three parts.

Barren Cow.—J. F. S., Buffalo Cross Roads, New York. It is impossible to tell whether the trouble is in the ovaries, the fallopian tubes, or in the uterus. If in the former, probably some degeneration is at the bottom of it, and if in the fallopian tubes, or in the uterus, the difficulty, very likely, is due to a closing of these parts by an adhesive process caused by some inflammation that may have existed. Medicines are ineffective, and can do no good whatever, because, as you state, the sexual impulse is not dormant.

Rough Hoofs—Shoulders Shrinking.—R. H., Orchard. As to the "rough" hoofs of your horses and mules, scraping and filing or rasping must be avoided, but if you put a good floor in your stable, and see to it that the feet of your horses and mules are kept clean, you will in the future have no cause to complain. Oiling does no good; it is cleanliness that is needed.—I do not know what causes the shoulders of your colt to shrink. A shrinking of the muscles of the shoulder will take place in cases of chronic lameness, but as you do not state that your colt is lame, I cannot answer your question.

Dog Distemper.—F. L., Fort Scott, Kan. You can keep a dog from getting the distemper only if you can keep him in a place in which he is not exposed to an infection, but this, for obvious reasons, you will find a difficult undertaking. If a dog becomes infected, and the first symptoms do not escape observation, an emetic of white hellebore or veratrum album will, in most cases, cut short the attack. The dose, of course, depends upon the size and the age of the dog, and varies from one to fifteen grains. If the dose is correct, the emetic will have effect in twenty minutes. If it has not, another dose may be given.

Cow-Pox.—S. S., Skaneateles, New York. Cow-pox is a disease, which, like all other diseases due to a specific cause, will run its course. It requires no treatment, except good care and careful milking, and if the cows are kept in a stable, scrupulous cleanliness and dry and clean bedding. If, however, there should be much inflammation in the udder, or if sores should be left behind, the inflamed parts and the sores may be anointed with a mixture of liquid subacetate of lead, one part, and pure sweet oil, three parts, or, in milder cases, that is, if the sores are rather superficial, with a mixture composed of equal parts of lime-water and sweet oil.

Ruined by Overwork.—W. H. S. D., Six Mile, Ind. You have ruined your colt by hard work. Mowing is no work for a two-year-old colt, no matter how strong and vigorous the same may be. All tissues are yet soft at that age. The muscles are tender and the bones lack firmness. You ask what ails your colt after you have "doctored" the same with all possible quack medicines. It would have been more reasonable to ascertain the nature of the disease before "doctoring." At present the ailment, it seems, is a complicated one. Bones and tendons have given way, and the muscles, very likely, are in a state of degeneration. The case is a hopeless one, and the best you can do now is to put the poor animal out of its misery.

Barbed-Wire Wound.—C. C. L., Effingham, Kan. You probably neglected to examine and to clean the wound, and did not apply your diluted carbolic acid in a thorough manner, or applied it too strong. You probably also neglected to protect the wound by properly dressing the same and by bandaging the injured parts. As it is now, the sore or abscess must first be cleansed, then you may dress the same with iodoform and absorbent cotton, and this done, apply a bandage. In applying the latter, commence at the hoof and wind upward. The dressing must be renewed at least twice every twenty-four hours, and the bandaging must be continued until the swelling does not any more decrease. A clean bandage should be put on every time the sore is dressed, and after the latter has healed the bandage should be removed twice a day.

Blind Staggers—Paralytic Attack.—W. R. O., Clearville, Pa. Your mare is affected with a brain disease, which is known by the name of "blind staggers." The disease consists in an accumulation of serum in the ventricles of the brain and beneath the membranes which surround that organ. The symptoms you describe are due to the pressure upon the brain, caused by the accumulated serum, and are always worse, first, in warm weather, and secondly, when the animal has become warmed up by exercise. There is no cure. A horse thus affected is worthless, and even dangerous, especially if used on the road.—You are probably right in your diagnosis, but as to a cure, the time has passed. There is

no prospect of recovery now. You are too reckless with croton oil, and if you had had a good article you surely would have killed both animals. Neither croton oil nor fat oils, in general, can be considered as proper medicines for horses. They are dangerous.

Luxation of the Patella.—J. H., Murray, Pa., writes: "I have a two-year-old colt that is affected with stifle lameness, for which I cannot find a remedy. Have turned her loose in the stable, have kept her tied, kept the stable level, and blistered with liniment. Nothing does any good. It occurs after she has been in pasture, and in both legs—but never both at the same time. Has been this way for over a year. Please explain the cause, also give a remedy."

ANSWER:—Yours is certainly a bad case; still, you may yet succeed if you tie the colt in the stable in such a way that the same cannot lie down, but must be kept standing, and then apply a good blister (cantharides, one part, and oil, four parts, heated in a water bath for one hour, and then strained, will answer), say once every four days, so as to produce considerable swelling. It may be necessary to continue this treatment for three weeks or even longer.

Ringbone—Bog-Spavin.—Clay Center, Nebraska: "The swelling of the foot of your seven-year-old mare, though pathologically different, is practically equivalent to a ringbone. Whether anything can be done for her or not depends upon the severity and the extent of the injury. If the latter is limited to the joint between the first and second phalanx, that is, the joint between the pastern and the hoof, there and rest may possibly effect some improvement, but if the injury extends to the hoof joint, that is, the joint between the second and third phalanx, it is a hopeless case.—As to your colt, I should say that a Kentucky mare, which probably means a thoroughbred, and a Norman horse, constitute about as bad a match as can be imagined, and the offspring of such a match, it must be expected, will be disharmonious in its make-up, and be subject, not only to such ailments as you describe, but also to a great many others. Bog-spavin and thoroughpin, although seldom causing any lameness, are noticeably removed. Perhaps the best you can do under existing circumstances, is to apply to both the bog-spavin—a blood spavin is an entirely different thing—and the thoroughpin once a day, some tincture of iodine. As the latter will temporarily stain the hands, it will be well not to rub it in with the bare hand, but to cover the same either with a piece of hog's bladder or with a rubber glove."

Hog-Cholera or Swine-Plague Inoculation.—B. F. McC., Scioto, Ind., writes: "I want to know how to distinguish hog-cholera from swine-fever. I have read Dr. Detmers' report in the United States report of agriculture, made a few years ago when he was employed by the Commissioner of Agriculture to investigate the then so-called swine-plague. I would like to know how to distinguish them. I have lost some hogs within the last six weeks with what we term cholera. When first taken, they refused to eat; would come to the feeding place and take a bite or two of corn and go off and lie down, or stand around; would drink slop after they would not eat corn; all purged, without an exception. Occasionally, the excrement would be dark, or rather black. Most of them vomited. The disease was generally fatal in from seven to ten days. The animals did not seem to present that emaciated appearance that I have seen among hogs that were supposed to have cholera. A few recovered. The only medical treatment that I employed was carbolic acid. I gave them ten drops to the hundred weight (approximated) three times per day, but I lost one half of what I had. Is there anything that a hog can be inoculated with that would be a preventive of cholera or swine plague?"

ANSWER:—There is no difference between hog-cholera and swine-plague. It is the same disease. The term hog-cholera, used by the farmers, is a misnomer, because it reminds of Asiatic cholera, an entirely different disease. I therefore introduced in 1878 the term "swine-plague," which is nothing more nor less than a translation of the German "schweine-seuche," the name given in Germany to the same disease. Salmon claims to have discovered a new disease, for which he, probably in order to create confusion, appropriated the name swine-plague. He, in his writings, fails to give any new distinguishing features except in so far as he claims that it is produced by a different germ. Still, Dr. Bolton, one of the members of the "United States board of inquiry concerning epizootic diseases of swine," failed to produce the disease, notwithstanding that he inoculated a pig with five cubic centimetres and more of a culture of Salmon's bacteria, a dose, one should judge, large enough to kill any hog with almost any kind of bacteria. The other members of that celebrated United States board of inquiry, above mentioned, also fail to give any distinctive characteristics, and one of them wrote me that the new disease had been observed only in a few cases in the East, near Washington, and in one case in Kentucky. To tell the truth, I very much doubt its existence, and am inclined to believe that unless Salmon imported it from Europe—may be, the European Wildsenche—he only invented it in order to save one of his numerous swine-plague germs. May be the members of the above mentioned board of inquiry can give the desired information. Their report, which, it is said, has cost the country \$30,000, is silent about it. It does not even furnish a description of Salmon's germ. The members of the board are: Dr. Shakespeare, in Philadelphia, a physician; Prof. T. J. Burrill, in Champaign, Ill., a botanist, and Dr. Bullitt, in Brooklyn, N. Y., a carbolic acid, first recommended by me, not as a cure, but simply as something that might be given to prevent or mitigate an open outbreak of the disease where an infection cannot be prevented, is ineffective after the morbid process has fully developed. Besides that, a dose, like the one mentioned, should not be given three times a day. As to a preventive inoculation, I prefer to refer you to Dr. Frank S. Billings, in Chicago. According to my experience, the immunity produced by an attack of the disease from which the animals recover is only temporary and imperfect, because I have seen numerous cases in which the animals had the disease twice, and I know at least a few cases in which they were attacked three times. These cases, I think, would be rare enough, still, if the disease were less fatal, and recoveries from the first attack less frequent. Still, a temporary and partial immunity is produced by an attack that terminates in recovery. Your hogs, of course, were affected with genuine swine-plague or so-called hog-cholera, and not with Salmon's bogus article. He appropriated a name in his own name, and formerly used it as a trademark.

Our Farm.

THE POULTRY YARD.

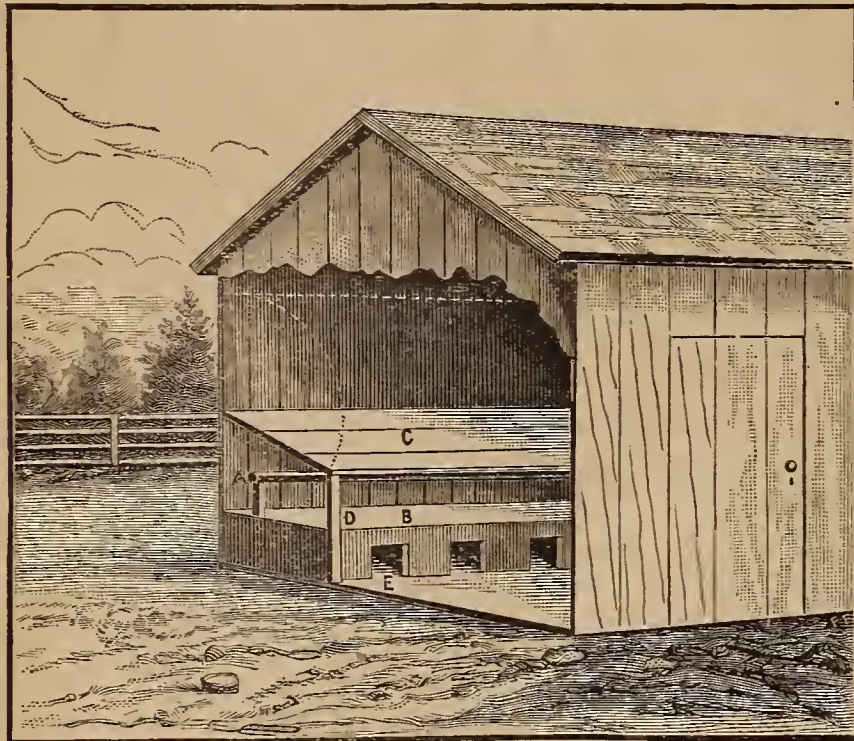
Conducted by P. H. Jacobs, Hammononton, New Jersey.

FEEDING AND WARMTH.

The food not only serves to build up and repair the waste of the body, and provide the elements that enter into the composition of eggs, but it must also serve as fuel, to keep the hens in a comfortable condition during severe cold weather. The higher the temperature of the poultry-house, therefore, the smaller the amount of fuel (food) is required to be consumed. It is plain to all, in the face of this fact, that shelter economizes the food, and that it can lessen the expense in proportion to its degree of usefulness. Every dollar saved in the construction of the poultry-house is a dollar spent for food, unless the house is so constructed as to fulfill the requirements expected, and as the bodily warmth of the hens must be created at the expense of food, the hens will be more profitable when well sheltered than if exposed. In feeding, however, the quality also affects the productiveness of the flock, as it may abound in elements not in urgent demand and be lacking in the elements needed for immediate use. It is well, then, to bear in mind, when feeding, that fat hens require less grain than those poor in flesh, and that when feeding grain in winter the fowls should have an extra allowance on very cold days.

A CHANGEABLE ROOST.

It is very difficult to construct a poultry-house that serves for both winter and



A CHANGEABLE ROOST.

summer, but in the illustration the object is to show a cheap and convenient mode of protecting the fowls, when on the roost in winter, and also to give them the benefit of the cool air in the summer. The figure shows a winter protection against draughts of air. A is the roost, which extends across the poultry-house, and rests on the platform B. A hinged door (or any kind of arrangement preferred) is attached to the wall. This door, C, may be raised up and fastened to the wall, as shown by the dotted lines, or may be lowered so as to rest on the post and rail, on the edge of the platform. This post is shown at D. The nests, E E E, are under the platform. The space between the floor of the platform and the hinged door gives an opening across the house for the fowls to go on or off the roost. As soon as the weather becomes cold, it is only necessary to lower the door and the roost is ready for winter, the fowls being warm and comfortable. When warm weather approaches, raise the door and the work is done.

FEED AND WATER IN COOPS.

If live fowls are shipped to market, place bag of grain on the coop, and put at least drinking cups in the corners. The requisite is plenty of sand and gravel floor of the coop, to provide grit, and of crowding them, put only as in the coop as can be shipped

THE LARGE BREEDS OF DUCKS.

The Pekin duck has become very popular, attributed by some to its large size, but it does not exceed the Rouen or the Aylesburg in weight, nor is it as tame and gentle. The two advantages possessed by the Pekins are white plumage and yellow legs and bills. As long as the purchasers in market continue to judge of quality of flesh by the color of the legs, the Pekin will lead, yet the color of the legs of a fowl does not indicate quality. The Aylesburg duck is also white in plumage, but the legs and bill are flesh color. As a table fowl it is superior to the Pekin, having more breast meat. The Rouen duck is fully the equal of the others, but being of variegated color it cannot compete with the Aylesburg or Pekin except for ornament; but it is, without doubt, the most beautiful of all the aquatic domestic birds.

THE CREEPER FOWL.

Another breed of fowls is coming to the front, and it will eventually be very popular, as it combines more advantages than many others. There are two varieties of the breed—creepers—known as Cuckoo creeper and Snowflake creeper. The Cuckoo creepers may be described as the Plymouth Rocks on short legs, and the Snowflake creepers as white Plymouth Rocks on short legs. They are as large as Plymouth Rocks, have small combs, yellow legs and skin, are very hardy (the bone being stout) and they lay well, showing but slight disposition to sit. Their legs are very short, the shank, from the knee to the toes, being not over two inches on the adult fowl. They waddle like a

TARRED PAPER.

For the winter, the use of standard roofing, which is a superior grade of tarred paper, will enable the poultryman to render the house warm and comfortable. It makes an excellent roof, and if covered with the paint once or twice the first year, the roof will last a lifetime. Cheap boards, or any kind of old material, may be used for building a poultry-house, if the walls are lined and made tight. The best houses are not always the most expensive ones.

QUERIES ANSWERED.

Oil for Incubators.—W. S. C., Denver, Col., writes: "I would like to know what kind of oil is used in an incubator, and what will prevent the lamp from going out."

REPLY.—Use kerosene, of high test. The lamp will not smoke or go out if the draught is perfect.

Pigeons for Market.—Subscriber asks: "Are pigeons raised for market; are they sold alive or dressed, and would it be profitable to attach pigeon raising to poultry raising, on a small scale, which I am already engaged in?"

REPLY.—Pigeons (adults) do not find ready sale in market. Squabs sell well, at about four dollars per dozen. They are shipped dressed, as it is difficult to ship them alive. Pigeons are profitable when the sale of squabs is the object. They should have a suitable house and be carefully attended to.

CATARRH CURED.

A clergyman, after years of suffering from that loathsome disease Catarrh, and vainly trying every known remedy, at last found a prescription which completely cured and saved him from death. Any sufferer from this dreadful disease sending a self-addressed stamped envelope to Prof. J. A. Lawrence, 88 Warren street, New York, will receive the recipe free of charge.

MONITOR INCUBATOR Best Improved of any for stamp. A. F. Williams, Bristol, Ct.

POULTRY FOOD!
HOLLIS' CANNED MEAT for POULTRY Will make Hens Lay! Will make Chickens Grow! AND GOOD FOR MOULTING FOWLS.

This food is strictly fresh meat, carefully cooked, ground fine, seasoned and hermetically sealed in 8-oz cans. Being ground fine, it can be readily mixed with soft food and fed so as to give each fowl an equal share. Price, 30 cents per can; \$3 per dozen. Address HOLLIS DRESSED MEAT & WOOL CO., 20 North Street, Boston, Mass. Mention this paper.

OILMEAL

Absolutely pure and of high feeding value. (Old process.)

ROYAL STOCK FOOD
—OR—
EXTRA OILMEAL

For Dairy Cattle and Young Stock. Most useful for producing Milk.

CALF MEAL,

Milk Substitute for Calves and Young Stock.

All at lowest export prices to the consumer.

E. W. BLATCHFORD & CO.,
LINSEED OIL WORKS,
CHICAGO, ILL.

MAKE HENS LAY
NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER.
WE SEND BY MAIL A LARGE 2 1/4 POUND CAN FOR \$1.20 TWO SMALL PACKS 50 CTS POST PAID.
Sheridan's Condition Powder

Is absolutely pure and highly concentrated. One ounce is worth a pound of any other kind. Strictly a medicine to be given in the food, once daily, in small doses. Prevents and cures all diseases of hens. Worth its weight in gold when hens are moulting, and to keep them healthy. Testimonials sent free by mail. Ask your druggist, grocer, general store, or feed dealer for it. If you can't get it, send at once to us. Take no other kind. We will send postpaid by mail as follows: A new, enlarged, elegantly illustrated copy of the "FARMERS' POULTRY RAISING GUIDE" (price 25 cents) tells how to make money with a few hens, and two small packages of Powder for 60 cents or, one large 2 1/4 pound can and Guide, \$1.20. Sample package of Powder, 25 cents, five for \$1.00. Six large cans, express prepaid, for \$5.00. Send stamps or cash. T. S. JOHNSON & CO., 22 Custom House Street, Boston, Mass.

WELLS, RICHARDSON & CO'S
IMPROVED

Butter Color.

EXCELS IN STRENGTH PURITY BRIGHTNESS

Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color. For sale everywhere. Manufactory, Burlington, Vt.



A BEAUTIFUL (Stem Wind) Lady's or Gent's Hunting Case

FILLED GOLD WATCH \$18.

With ELGIN, WALTHAM, or any American Lever Movement. Warranted to wear well 20 Years at least. Quality equal to what is sold at \$38 to \$40. Examination allowed before paying. For further particulars, references, &c., that will pay you to have, PENN WATCH CO., Manufacturers, write to 140 S. Third St., Philadelphia.



\$325 CASH

will be distributed among the first 143 persons who return this advertisement showing by plain ink lines how to reach the center of the puzzle, entering at the edge and not crossing a black line. The first person showing the correct way to enter will receive \$50, the second person \$15, the third \$10, the next 15 persons \$5 each, the next 25 persons \$3 each, the next

100 persons \$1 each. If you do not get one of the largest amounts you have 142 chances for one of the others. This offer is made to introduce the CHIMNEY CORNER in new homes and competitors must send 30 cts. in payment for six months' subscription. It comprises 16 pages, 64 columns, is handsomely printed and elegantly illustrated. Further comment is unnecessary as everybody has heard of the Chimney Corner. No charge is made for your chance, as 30c. is the regular price charged for the paper. Four trials for \$1. Don't delay but write at once and win the big award. Contest closes January 5. Names and addresses of winners will appear in the Chimney Corner of January 15. For only 30 cts. you may get \$50. One cent stamps same as cash. Address THE CHIMNEY CORNER, 67 & 69 Dearborn St., Chicago.



To introduce them, one in every County or Town furnished reliable persons (either sex) who will promise to show it. Borden Music Box Co., 7 Murray St., N.Y.

18k. Rolled Gold Rings



Chased Ring. By mail, Twenty cents



Friendship Ring. By mail, Eight cents



Band Ring. By mail, Thirty cents



Heart Ring. By mail, Ten cents



Girl's Ring. By mail, Eight cents



Wedding Ring. By mail, Fifteen cents

We warrant all the above rings to be best 18k. rolled gold. These rings are regular One Dollar rings. We send the above at the special prices given under each article, in order to introduce our great illustrated catalogue of jewellery, sent free with the goods. Postage stamps taken as cash, but silver preferred. Send stamp of paper just the size of your finger. J. LYNN & CO., 769 Broadway, NEW YORK.

Our Miscellany.

"Our lives are songs; God writes the words,
And we set them to music at pleasure,
And the songs grow glad, or sweet, or sad,
As we choose to fashion the measure."
—Youth's Companion.

LET the sunshine into every room in the house. The sunlight is a great purifier.

FRETTER cures no evil, it is true, but it sometimes relieves the monotony of too much happiness.

BETTER to pay the organ-grinder two cents for music, if you must have it, than to owe for a grand piano.

WE call special attention to the advertisement of Hensch & Dromgold's new and improved ratchet spring-tooth harrow, on page 48, with which the tooth can be adjusted so as to wear from 15 to 18 inches off the point of the tooth. They are having an immense sale on this harrow, and if you are interested you should send for a circular.

IT is advisable to put our heart into whatever work we may have to perform, but it is wise to think well before we put our money in.

A city child, seeing a sunflower in the country for the first time, said she never knew those artistic pen-wipers grew in gardens before.—Puck.

WHEN a person becomes too good to overlook the faults of the unfortunate, then it is that he makes the error which loses to him the glory of his goodness.

FIGHT your own battles. Hoc your own row. Ask no favors of any one, and you'll succeed a thousand times better than one who is always beseeching some one's influence and patronage.

SOMEBODY claims to have discovered a substance that is three hundred times as sweet as sugar. It is not known what that substance is, but it is supposed to be about eighteen years old and to have a fondness for ice-cream.

EVERY day that the sun rises upon the American people it sees an addition of \$2,500,000 to the accumulation of wealth in the United States, which is equal to one third the daily accumulation of all mankind outside the United States.

THE man who is busy working doesn't have time to read up on the subject of capital and labor, and the man who puts in his time reading on that subject doesn't have time to work. That's why no one reaches a complete comprehension of the difficulty.—Merchant Traveller.

A GERMAN boy was reading a blood-and-thunder novel. Right in the midst of it he said to himself: "Now this will never do. I get too much excited over it. I can't study so well after it. So here it goes!" and he flung the book out into the river. He was Fichte, the great German philosopher.

"Well, well," mused the lovelorn youth, "I'm in a fix. If I marry Mabel, people will say that I married her for her money, and if I suddenly give her up from conscientious motives, people will say she jilted me because I am poor. I guess I'll brave opinion and propose at once."

Father—"My son, you must not dispute with your mother in that way."

Boy—"But she's in the wrong."

Father—"That makes no difference; and you might as well learn, my child, once for all, that when a lady says a thing is so, it is so, even if it isn't so!"—Pick-Me-Up.

He was a farmer's boy and very little. His father was pulling off his stockings one evening, preparatory to going to bed, when his mother asked, "Freddy, what is father doing?" Freddy had witnessed the process of treating ripened corn and replied: "He's hnskin' his feet."—Worcester Chronicle.

DR. J. C. CUTTER, long a resident of Japan, has communicated to the Boston Medical and Surgical Journal many pertinent items as to the superiority of vegetable diet. The coolies of Japan, he says, live on three teacupfuls of rice and a little tea per diem. On this simple diet they will carry two thirds of their weight on their backs through swamps and over hills and will cover eighteen or twenty miles a day and yet keep their condition under an atmosphere surcharged with moisture on a July day. The Jhriksha men have been known to draw an adult fifty or sixty miles a day on this simple diet, the same man going the entire distance. "I am credibly informed," says Dr. Cutter, "that a Tokio man drew a native ninety miles in twenty-four consecutive hours, and did it on a simple diet of rice and tea."

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 820 Powers' Block, Rochester, N. Y.

THE POPULAR IDEA OF MARRIAGE.

It is certain that the society man of to-day marries a woman who makes his home a restful place, from which he is seldom tempted to wander. Why should he? The sunniest, brightest room in the house is his sanctum, here are his favorite books, pictures he likes, the latest magazines, leaves cut, and no end of pipes. When the train whistles into the depot, in which is this fortunate man, a fire is started on the low hearth to make the room cheerful, although the warmth is not needed. To this room he brings his friends, and here husband and wife sit when alone. Everything that will help the wife to make home a means of grace she reads; on her table are always to be found books and magazines that talk of the higher life of the home. I mean good cooking when I say higher life, a hitherto much neglected part of religion. This man, formerly out every evening, rarely goes to the theatre or opera, party or ball, because his home has greater attractions, and he is really now so sensible, well-informed and amounting to something that his friends are rejoiced that the seemingly incongruous marriage came about.

Best and largest in America. Spencerian Business College & Shorthand School, Cleveland, O. Elegant circulars free.

COMBINATION PENS. 25 Christmas, New Year, Birthday and Name Cards & Art's sample Book of 30 styles, all for 10c. R. H. Pardee, New Haven, Conn.

AGENTS Wanted, local and traveling. Good pay. Circulars and samples free. Address EUREKA R. T. WORKS, 437 Virginia Ave., INDIANAPOLIS, INDIANA.

WE CAN SHOW YOU HOW TO make \$100 per month. Just send for circulars. Cassgreen Mfg. Co., 79 W. Madison St., Chicago, Ill.

Gold Hunters' Adventures In AUSTRALIA. By Wm. H. THOMES; 12mo, 564 Pages, 40 full-page Illustrations. A stirring story of Adventures among Bushrangers and Outlaws. Largest and best Books ever sold for price, only 25 cents, postpaid. Address ALEX. T. LOYD & CO., Lakeside Building, Chicago, Illinois.

STRONGEST VIOLIN STRINGS. In the World. Howe's Celebrated No. 19 String 7 for \$1.00. Full set 4 Strings, 60 cents. Best Italian strings 20 cents each. 1,235 Old Violins and 600 varieties Violins, Violas, Cellos, and Bases, 75c to \$3.500. Violin Cases, Bows, Neckes, Tops, Backs, Varnish and all fittings. Music Books for all instruments. Best assortment, lowest prices in America. Send for catalogue. ELIAS HOWE, 83 Court St., Boston, Mass.

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The Cabinet Organ was introduced in its present form by Mason & Hamlin in 1861. Other makers followed in the manufacture of these instruments, but the Mason & Hamlin Organs have always maintained their supremacy as the best in the world.

Mason & Hamlin offer, as demonstration of the unequalled excellence of their organs, the fact that at all of the great World's Exhibitions, since and including that of Paris, 1887, in competition with the best makers of all countries, they have invariably taken the highest honors. Illustrated \$22 to \$900 catalogues free.

Mason & Hamlin do not hesitate to make the extraordinary claim for their Pianos, that they are superior to all others. They recognize the high excellence achieved by other leading makers in the art of piano building, but still claim superiority. This they attribute solely to the remarkable improvement introduced by them in the year 1882, and now known as the "MASON & HAMLIN PIANO STRINGER," by the use of which the greatest possible purity and tone, together with greatly increased capacity GRAND & UPRIGHT, for standing in tune and other important advantages.

A circular, containing testimonials from three hundred purchasers, musicians, and tuners, sent, together with descriptive catalogue, to any applicant. Pianos and Organs sold for cash or easy payment; also rented.

MASON & HAMLIN ORGAN AND PIANO CO. BOSTON. NEW YORK. CHICAGO.

ORGANS

PIANOS

DR. J. C. CUTTER, long a resident of Japan, has communicated to the Boston Medical and Surgical Journal many pertinent items as to the superiority of vegetable diet. The coolies of Japan, he says, live on three teacupfuls of rice and a little tea per diem. On this simple diet they will carry two thirds of their weight on their backs through swamps and over hills and will cover eighteen or twenty miles a day and yet keep their condition under an atmosphere surcharged with moisture on a July day. The Jhriksha men have been known to draw an adult fifty or sixty miles a day on this simple diet, the same man going the entire distance. "I am credibly informed," says Dr. Cutter, "that a Tokio man drew a native ninety miles in twenty-four consecutive hours, and did it on a simple diet of rice and tea."

CATARRH

HAY FEVER

CATARRHAL DEAFNESS

A NEW TREATMENT.
Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and enstachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been discovered which permanently cures the most aggravated cases of these distressing diseases by a few simple applications made (two weeks apart) by the patient at home. A pamphlet explaining this new treatment is sent free by A. H. DIXON & SON, 337 and 339 West King Street, Toronto, Canada.

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Genuine French BUHR STONES
Power Corn Sheller
Prices Below the Lowest
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Say you saw this in Farm and Fireside.

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PHOTO OUTFIT CO., Augusta, Me.

DO YOU WANT MONEY?

\$13,000,000 is a Big Pile of Money to GIVE AWAY, but as I have got rich myself, I am ready to help others in my advancing years. It has always been said, when Old Dr. Brown opens his Safe Door, it would be a Grand Sight. You can now look on the inside. I am now ready to let you into the Secrets of Money Getting. Some persons, assisted by me, have made from \$2,000 to \$20,000 in ONE YEAR. You CAN DO THE SAME. Young or Old, Lady or Gent, money does not keep. It is going to be put out; now be sure and come in for your share. All want to get rich, enjoy the fruits of life, I my (agents) of Gold to guessing the her of Silver pile under it, we should all Com forts will (through give this Bag the firestone correct num Dollars in the and distributa this pile of bills held in my hand, ranging from \$1 to \$100 each, to those coming the nearest, as soon as 13,000 answers have been received. All you have to do is to enclose 12 cents with each guess you make, simply to pay for registering, &c., and I guarantee to send every one a box of goods FREE, that you can realize a fortune from, if directions are followed. As millions will read this notice, 13,000 answers should come in thirty days.

GUESS How many Silver Dollars are in this Pile.

SPECIAL. To every one sending 12 cents answering this advertisement before 30 days, I will enclose a Cash Certificate valued at 50c. This is a free gift to every one. Address

OLD DR. BROWN, Box 1675 Augusta, Me.

\$500.00 Given

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And those who send the Largest Number of Three-Months Trial Subscribers at 15 Cents Each, from now till December 1, 1889.

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THOSE COMPETING FOR THE CASH PRIZES MUST SEND 4 OR MORE NAMES AT ONE TIME.
The Three-Months' Trial Subscriptions may be for either of our two publications—the FARM AND FIRESIDE or the LADIES HOME COMPANION—and the Presents will be awarded to the persons sending the most subscriptions for either or both papers.

A Premium for only ONE Trial Sub

In addition to the above Grand Prizes, you can select any ONE of named below for each Trial Subscriber you send at 15 cents each, thus giving you valuable premiums as pay for your trouble and also an Equal Chance for the Cash Prizes.

- 1 Dozen Lead Pencils. Premium No. 481. With rubber tips. They sell in the stores for 5 cents each.
- 1 Dozen Pens and a good Penholder. Premium No. 480. All good and useful articles.
- 114 Songs, with Music. Premium No. 523. A collection of the best of American songs by American composers. Words and music complete with each song.
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- Book of Home Amusement. Premium No. 519. A complete of Public and Private Entertainments, Exhibitions, etc.
- John Houghman's Pictures. Premium No. 828. A collection of 100 of the best of the world's pictures. 30 illustrations.
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Premiums for Two Trial Subscribers.

For clubs of Two Trial Subscribers, at 15 cents each, you can select any one of the following: The grand picture, "Christ Before Pilate," Premium No. 100.—73 Stamping Patterns, Premium No. 393.—Any one of the Model Books, advertised in former issues.—The Housekeeper's New Cook Book, Premium No. 803.—The Haudy Horse Book, Premium No. 820.—Or the Complete Poultry Book, Premium No. 816.

CASH COMMISSION

If you prefer it, you may retain a Cash Commission of 15 cents for each club of 4 Trial Subscribers, instead of the above premiums, and the names will all be counted in the contest for the Cash Prizes.

You should endeavor to obtain the names of your friends as Trial Subscribers for both papers, collecting 15 cents for each, 30 cents in all, and, of course, all such will be counted as two subscriptions. Names of subscribers should be sent in promptly as soon as secured, and an account will be kept with each agent until the end of the contest. Less than 4 names received at one time will not be counted in the contest. The premiums for clubs of subscribers must be selected when the names are sent in.

The contest is open to men, women, boys and girls, and all have an equal show. All you want is the WILL.

Order Premiums by the Numbers, and address all letters to FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Recent Publications.

EXPERIMENT STATION BULLETINS.

CALIFORNIA.—(Berkeley). Reports of examinations of waters, water supply and related subjects, during the years 1886-89.

CANADA.—(Ottawa) Bulletin No. 5, Strawberry culture.

INDIANA.—(Lafayette) September, 1889, Smut of wheat and oats, illustrated.

KENTUCKY.—(Lexington) September, 1889, Wheat experiments. The grain-louse.

MICHIGAN.—(Agricultural College, P. O.) July, 1889, Analysis of commercial fertilizers.

MISSISSIPPI.—(Agricultural College, P. O.) August, 1889, Spraying with the arsenites.

MISSISSIPPI.—(Agricultural College, P. O.) August 30, 1889, Stock feeding.

PENNSYLVANIA.—(State College, P. O.) July, 1889, Systematic testing of new varieties.

NEW YORK.—(Cornell Station, Ithaca), September, 1889, A study of windbreaks in their relations to fruit growing. Illustrated.

AGENTS WANTED to introduce our popular and fast-selling Annuals (for 1889 & '90). A perfect treasury of good things for little folks. 52 full-page Handsome Colored Illustrations. **Buds of Hope** MORE THAN 14C. OTHER ILLUSTRATIONS IN EACH. The most popular and valuable Holiday Books in the market. Low Prices. Liberal Terms. Address, Standard Publishing Co., Cincinnati, O.

WANTED General Agents **RAND, McNALLY & CO.**

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LADIES, CAUTION! As our advertisement, both in general appearance and wording, by advertisers who seem to be devoid of principle, and, in recent years, have been reporting as coming from one MARION WALKER, of Louisville, Ky., may probably mislead, (having all semblance of our own) we desire to say that we have no disposition, and it is contrary to our business principles to draw money from unsuspecting women. We have no interest in the advertisement referred to other than to protect ourselves against competition. EMORY & CO., Cincinnati, O.

\$75 PER MONTH SALARY and expenses paid, any active man or woman to sell a line of Silver Plated Ware, Watches and Jewelry by sample only; can live at home. We furnish Team Free. Full particulars and sample case free. We mean just what we say, and do exactly as we agree. Address at once, Standard Silverware Co., Boston, Mass. Mention this paper.

OVERSEERS WANTED Everywhere at home or to travel. We wish to employ a reliable person to your country to take up advertisements and show cards of Electric Goods. Advertisements to be taken up everywhere, on trees, fences and turnpikes, in conspicuous places, in town and country in all parts of the United States. Steady employment; wages \$2.50 per day; expenses advanced; no talking required. Local work for all or part of the time. ADDRESS WITH STAMP, EMORY & CO., Sixth and Vine Sts., CINCINNATI, O. NO ATTENTION PAID TO POSTAL CARDS.

100 Complete Stories FREE! and a Charming Paper for Three Months. To introduce our charming paper, THE PEOPLE'S HOME JOURNAL, into thousands of homes where it is not already known, we make the following extraordinary offer: Upon receipt of only Ten Cents in silver or postage stamps, to pay the postage and help pay the cost of this advertisement, we will send THE PEOPLE'S HOME JOURNAL for Three Months, also One Hundred Complete Stories, including stories by H. Rider Haggard, Wilkie Collins, Miss Bradshaw, Mary Cecil Hay, Hugh Conway, Mrs. May Agnes Foulger, Sirraine Cobb, Jr., and other famous authors. This is a wonderful opportunity; do not miss it. THE PEOPLE'S HOME JOURNAL is a mammoth 16-page, 64-column illustrated literary and family paper—one of the best published. You will be delighted with it, and the 100 complete stories will supply an abundance of good reading for the long winter evenings. Six subscriptions, with the 100 stories to each, for 50 cents. Satisfaction guaranteed or money refunded. We refer to any newspaper published in New York, also to the Commercial Agencies, as to our reliability. Address, F. M. LUTTON, Publisher, 63 Murray St., New York.

THE DANCING SKELETON. A jointed figure of a skeleton 14 inches high. Will dance to music and perform various tricks. When placed in a chair or on a table will begin to move, stand up, lie down, etc., to the astonishment of all. Just the thing for social gatherings. Sample by mail, 10c.; three for 25c.; one dozen, 50c. Howard Mfg. Co., Providence, R. I.

50 CARDS, &c., name on, Se. Jewel Co., Clintonville, Ct. 19 PHOTOS., only 10c. TAUBER & CO., BAY SHORE, N. Y.

978 Hidden Name, Silk Fringe, Envelope Cards, &c., 150 Latest Songs, 25 Illustrated Pictures, 75 Games, and New Sample Book of Circulars. Cards (not pictures). All only 1 cent. BONE & YOUTH, CADIZ, OHIO.

AGENTS wanted, \$1 an hour, 50 new varieties, Catalogue and sample free. C. E. Marshall, Lockport, N. Y.

Rubber Stamps. Best made. Immense Catalogue free to agents. The G. A. Harper Mfg Co., Cleveland, O.

YOUR NAME printed on 25 Snowflake Cards & Penholder, Pencil & Pen set for free. May Mfg. Co., Clintonville, Ct.

LADY Agents \$10 a day sure: new rubber undergarment. Mrs. H. F. LITTLE, Chicago, Ill.

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PHOTO of your future husband or wife FREE! Send Stamp for Postage. CLIMAX CO. CHICAGO, ILL.

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CARDS Finest Sample Book of Gold Beveled Edge. White Dove, Hidden Name Cards ever offered with agt's outfit for 2 cents. NATIONAL CARD CO., SCIO, O.

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Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

Fig. 10.

Fig. 11.

Fig. 12.

Fig. 13.

Fig. 14.

Fig. 15.

Fig. 16.

Fig. 17.

Fig. 18.

Fig. 19.

Fig. 20.

Fig. 21.

Fig. 22.

Fig. 23.

Fig. 24.

Fig. 25.

Fig. 26.

Fig. 27.

Fig. 28.

Fig. 29.

Fig. 30.

Fig. 31.

Fig. 32.

Fig. 33.

Fig. 34.

Fig. 35.

Fig. 36.

Fig. 37.

Fig. 38.

Fig. 39.

Fig. 40.

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Wheat No. 2 spr'g	80 @ 80 1/4	85	
" No. 2 w't'r	80 @ 80 1/4	86 @ 86 1/2	
Corn, ".....	30 1/2 @ 31 1/4	39 @ 40 1/2	41 @ 45
Oats, ".....	18 1/2 @ 22 1/4	25 1/4 @ 29	29 @ 33
LIVE STOCK.			
Cattle, Extra.....	4 90 @ 5 05	4 70 @ 4 90	
" Shippers.....	2 70 @ 4 85	3 25 @ 4 45	2 75
" Stockers.....	1 75 @ 3 00		
Hogs, Heavy.....	3 90 @ 4 50	4 60 @ 5 25	5 00 @ 5 50
" Light.....	4 00 @ 4 50	3 00 @ 4 00	
Sheep, com. to good	3 10 @ 4 75	4 00 @ 5 00	2 00 @ 3 00
" Lambs.....	4 50 @ 5 50	5 50 @ 6 75	
PROVISIONS.			
Lard.....	6 25	6 75	5 75
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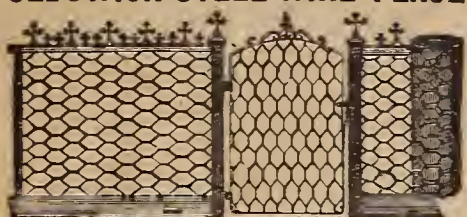


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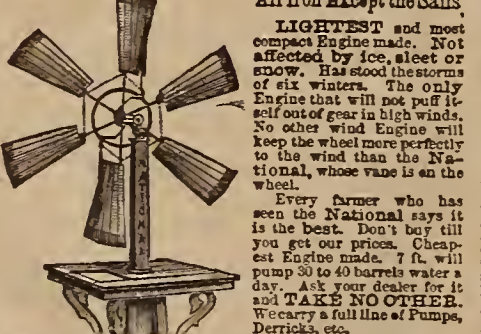
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100,100 copies, the Western edition
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Current Comment.

THE binder twine discussion in the agricultural press, a few months ago, renewed the interest in the home production of fibre plants. It has been known for years that ramie, jute and other valuable fibre plants could be successfully grown in many parts of the South, even over a wider area than cotton. But the industry remained undeveloped because there were no cheap processes and good machines for separating the fibre from the plant and preparing it for manufacture into cordage and textile fabrics. There are good prospects that the industry will be developed in the near future. There have recently been invented machines and processes for the cheap production of white fibre directly from the green ramie plant. And a company, the Ramie Company of America, Philadelphia, Pa., has recently been formed for establishing and developing the ramie industry in this country. The company proposes to distribute the plants among cultivators, loan them the decorticating machines for separating the fibre from the bark, and buy the product. Ramie is one of the most valuable fibre plants known. The fibre is fine and strong, almost equaling silk. It can be made into thread, twine, rope, coarse cloth, or fine fabrics for domestic use. Since the imported fibres, with their manufacture, amount in value to more than two thirds of the cotton exportation of the United States, the importance of any invention that will help develop the home production of fibres can be readily seen.

It is reported that, within the past six months, seventy-five thousand farmers in Michigan have joined the Grange. The reason given is that they have been forced to do something in self-defense against monopolies and trusts. The lesson learned from combination is combination. Naturally, as soon as the farmers of any community determine to organize, they turn to the oldest and strongest organization of farmers in the country. It is a great advantage to join an organization, the machinery of which is in good working order.

There is a feature about this movement of the Michigan farmers that is attracting special attention. In some localities of the state they are repeating an experiment that has been made with varying success in other parts of the country. They make contracts with a single dealer in each line of business, agreeing to buy all the goods they need in his line exclusively from him, at a specified per cent advance over wholesale prices. By this arrangement the dealer gets a fair profit on his sales

and his customers the advantages of low prices. It is an effort on the part of consumers to reduce the price of goods they purchase by combination and the granting of monopolies to dealers. They are expecting to obtain by this what competition among rival dealers has failed to bring about.

Whether or not this policy is a sound one and will come out all right in the end, these farmers are to be commended for doing something practical that will give results at once. Economy and reform, like charity, begin at home. They are trying to reform some methods of doing business that are within easy reach, instead of simply meeting and passing resolutions against a few great monopolies which cannot be overthrown until the farmers all over the country are more thoroughly organized. They see a way to save some of their hard-earned dollars. And there is no dollar that deserves as much to be saved as the farmer's hard-earned dollar. "The farmer's dollar is heavy," said Emerson. "It is no waif to him. He knows how many strokes of his labor it represents. His bones ache with the day's work that earned it. He knows how much land it represents—how much rain, frost and sunshine. He knows that in the dollar he gives you is so much discretion and patience, so much hoeing and threshing. Try to lift his dollar, you must lift all that weight."

The agricultural press is filled with columns of talk about the big monopolies and the great burden which they place on the farmers of this country. Now, this is all very well, but do we not overlook the fact that there are little combinations in nearly every community in the land, and that the burdens which they impose will aggregate as much or more than those of the big ones? We refer to the combinations of business men and tradesmen that exist in nearly every city, town and village. Those who are in one combination may not possess any particular advantage over those who are in another combination; what is to be gained must come off those who are not organized. The burdens these combinations impose fall most heavily on the farmers. Combinations of tradesmen, merchants and artisans completely surround them. They can hardly sell, buy or hire anything without dealing with a combination of some sort. The unnecessary tax they pay to the little combinations that surround them amounts to a good deal more than the tax they pay for keeping up the local, state and national governments. It is high time for them to combine and fight with the same weapon that is used against them.

TRY the plan of paying cash for everything you buy. If you have not got the ready money, borrow it. The banker will loan it to you at a less rate of interest than you will have to pay the merchant for credit. When merchants sell on time without notes or security they are forced by necessity to cover their risks by charging high for credit. It will not pay you to make a banker of your merchant. Pay him cash, even if you have to borrow the money with which to do it.

THE following circular address is published by request of the Western Economic Association. The object is to have the next United States census show the mortgage indebtedness on the farms and homes of the country:

There is a growing feeling that the farmers and other wealth producers do not receive an equitable return for their toil. The statements are repeatedly made that "the rich are growing richer, and the poor poorer;" that ninety-five per cent of the wealth of the country is owned by less than five per cent of the population; that three fifths of all the wealth is in the hands of less than thirty thousand persons; and that the sturdy, self-respecting farmer is becoming the American peasant. Lack of facts upon which to base conclusions has rendered even theorizing valueless, and ignorance of the truth makes the prevalent discontent only more dangerous. The first requisite to an intelligent discussion of the subject is a knowledge of the actual facts of the case. Up to this time none of any importance have been collected. Much statistical information has been gathered and published to show the production of wealth in this country, but none to show its distribution. An important step in this direction, in fact, the primary step, would be the collection of data to show to what extent the farms and the homes—the basis of our civilization—are owned by their occupants and free from debt. Correspondence has been had with the chiefs of the bureaus of statistics of the various states, asking them whether they had collected any such information. With singular unanimity they reply that the facts are of great importance, and ought to be collected, but that the labor and expense of such an investigation are too great to be undertaken by a state bureau, and that the work naturally devolves on the national census. Mr. Robert P. Porter, superintendent of the eleventh census, in reply to correspondence on this subject, says that the act authorizing the census did not contemplate the collection of these data; that before he can undertake the work there must be special legislation by congress instructing him to do so, and that he will lay the matter before the Secretary of the Interior with a view to securing such legislation. There is no doubt that if a general public demand existed, the legislation could be secured. The country cannot afford to wait till another census for the facts, as at least fifteen years would be required to make them public, and in these days of the rapid concentration of wealth into a few hands, that time is too long for a first diagnosis of the case. By that date the patient may be fatally ill.

With a view to creating such a demand, the Western Economic Association, of St. Louis, has issued this address to the farmers and other wealth producers of the country. The practical method of procedure is for any body of such individuals, either organized or unorganized, to adopt resolutions of the following character, and to send them to Washington:

WHEREAS, There is a growing belief that the farmers and other producers of the country do not obtain an equitable share of the wealth which they create, and that the farms and the homes of the country are very largely under mortgage; and,

WHEREAS, Exact knowledge on this subject is of great importance in the study of the social and economic questions of the day; therefore, be it by (insert here the name of the body adopting the resolutions, and the locality).

Resolved, That it is our judgment that the next United States census should show what percentage of the people in this country occupy their own farms and homes, and what proportion are tenants; and of those who occupy their own farms and homes; what proportion have their property free from debt; and of the farms and homes which are under mortgages; what percentage of the value is so mortgaged; and be it further

Resolved, That the secretary of this meeting

he requested to transmit a copy of these resolutions to Hon. John W. Noble, Secretary of the Interior, Washington, D. C., and a copy to the congressman from this district, with a request that he use his influence to have these facts collected and published.

This matter is neither Republican nor Democratic. It is purely economic. The appeal is made to you personally, the reader. The next time you are in a meeting of the Wheel, the Alliance, the Farmers and Laborers' Union, ordinary mass meeting, or what-not, introduce resolutions expressing these sentiments, and send them to the officials named. As the reassembling of Congress is at hand, and as considerable time will be required to procure the necessary legislation and to prepare the schedules before the next enumeration, prompt action is necessary.

FROM an English exchange we take the following account of the wheat and barley experiments at the famous Rothamsted farm:

Sir John Lawes has just issued his annual memoranda of the Rothamsted experiments, bringing the records up to 1888. The tables show that the wheat crop on some plots was above average last year, while barley was below the mark on every plot but one. Where wheat has been grown on the same land every year during forty-six years, the average yield is given for the thirty-six years ending with 1887. The mean yield of two unmanured plots during the period averaged only 13½ bushels per acre; but this is in excess of the average for Russia, America or India. The highest average yield for the period was 36½ bushels, obtained on a plot to which was applied a very heavy and costly mixture of nitrogenous, phosphatic and alkaline manures, and the increase produced, at current prices, would not nearly pay the expense of those fertilizers. The result of applying fourteen tons of farm-yard manure annually was an average for the thirty-six years of 33¼ bushels, and in this case the increase would pay at current prices, and leave some profit, if the manure were valued at five shillings (\$1.20) a ton, without reckoning the increase of straw, but would barely pay if six shillings (\$1.44) a ton were allowed for the manure. The use of 275 pounds of nitrate of soda alone gave 23¾ bushels, the increase of grain paying well for the cost of the manure. It is remarkable that 400 pounds of ammonia salts, a more concentrated manure—in fact, a quantity containing twice as much nitrogen—has given a smaller average yield than the 275 pounds of nitrate of soda during the whole period. The addition of 350 pounds of superphosphate raised the yield of the plot receiving the liberal supply of ammonia salts only from 20¼ to 25¾ bushels; but a further addition of 366½ pounds of sulphate of potash brought the average up to 31½ bushels. In the experiments with barley the mean yield of the unmanured plots averaged 17¼ bushels an acre during the thirty-six years, and the highest average, nearly 49 bushels, was obtained on a plot to which 14 tons per acre of farm-yard manure had been annually applied. Other high averages were obtained by means of costly mixtures of nitrogenous and mineral manures. The use of 275 pounds of nitrate of soda alone brought forth an average of 33¾ bushels, and that quantity was increased to nearly 46 bushels by the addition of 350 pounds of superphosphate to the nitrate. Each of these two dressings was highly remunerative, the latter especially so. Indeed, no mixture has paid as well as that of nitrate of soda and superphosphate, which happens to be the one most frequently used by farmers. An equivalent to the nitrate, in the form of 200 pounds of salts of ammonia, produced an average of 29½ bushels, and the addition of 350 pounds of superphosphate increased the yield to 43¾ bushels. These quantities, compared with those just previously mentioned, show that, at Rothamsted, at any rate, nitrate of soda gives better returns in barley than ammonia salts.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
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Our Farm.

AGRICULTURAL CHEMISTRY

From the Standpoint of the Practical Farmer.

BY JOSEPH (TUISCO GREINER).

No. 21.

VALUE OF NITRATES.—An average
of analyses recently made gives the pure
nitrate of soda—the only grade imported
here—16 per cent of nitrogen, or 320
pounds to the ton. The commercial value
of this nitrogen (in nitrates) as agreed on
by the stations for 1889, is 17 cents per
pound, which would make a ton worth at
the retail dealer's \$54.40; and that, or a
little more, is about the price which deal-
ers usually charge whenever you succeed
in getting their consent to sell it to you.
It is said that the article can be adulter-
ated—for instance, with additions of white
sand, or of cheap potash salts. But every
buyer can easily examine the stuff upon
its purity. See if it all perfectly dis-
solves in water. If so, it is free from
sand. Then taste the solution, and if
this has no distinct salty taste, you may
be sure there is no cheap potash salt in it.

Now, when we are thus assured of hav-
ing the genuine article, we may also feel
certain that every ounce of this nitrogen
is ready for immediate use by plants.
With careful and judicious management
we need not lose a particle of it, and our
returns will come in crisp vegetables in a
very few weeks. And while we are aware
that this nitrogen is very soluble, and li-
able to be washed out of the soil if applied
too lavishly in excess of the plants' im-
mediate needs, we will know enough to
prevent useless waste by making our ap-
plications quite small, and rather often
repeated, not over 100 pounds per acre at
a time. When dealing with nitrogen in
the nitrate form, we understand (or have
the means to learn to understand) its
true nature and habits, and have no need
of putting our reliance on uncertainties
and guesswork—a most important ad-
vantage, not possessed by nitrogen in
other forms, as in farm manures, muck,
and even in the commercial concentrated
fertilizers.

The chemist cannot find out by analy-
sis how much of the nitrogen in such
materials is available, and how much is
not. The most he can do is to tell us
the amount of ammonia in the goods,
but not whether any or all of it is in con-
dition to feed plants or not. Here we
stand before a closed door, without a key
to open it. Our whole proud structure of
definite knowledge is shaky. We thought
we could see clear in the electric light
shed by the station reports and analyses,
and here we again find ourselves groping

our way in the dark, plodding along in an
experimental way and trying to solve by
our tests in the field what these learned
men refuse to tell us from their tests in
the laboratory. This is an element of
uncertainty which to me is terribly annoy-
ing. It also affords protection to the man-
ufacturer of poor but high-rated fertiliz-
ers, which are making a good showing
only in analysis, a protection which helps
him to palm off his low-grade stuff on
the farmer (who buys it on the strength
of its high analysis published in station
reports) without fear of immediate detec-
tion.

Whenever we wish to apply nitrogen to
our crops in the usual forms, we meet
this difficulty, this element of uncer-
tainty. The use of nitrates, especially
nitrate of soda, alone can deliver us from
this annoying and perplexing feature. It
enables us to reckon with definite figures.
No sham or cheat about it. We know
what we have and apply in it. For this
very reason its use gives us so much sat-
isfaction.

It is as yet an open question whether
the farmer can afford to buy nitrogen in
any form for the purposes of feeding
common farm crops, especially grains;
but for whatever purposes he thinks he
must purchase it, nitrate of soda may
often be employed to best advantage,
and at least cost. In the production of
crops, however, which sell for a compara-
tively high figure—potatoes, fruits and
vegetables—the certain and immediate
effects of nitrate of soda add usually so
much to the value of the crop, that the
original cost of this plant food is an item
hardly worth considering. I think I
would use it in the garden if I had to pay
\$100 a ton for it instead of \$60.

Another nitrate form of nitrogen is
saltpetre, and a very valuable one besides,
of quick and often even more marked
effects than the preceding, but too expen-
sive for general purposes of crop feeding.
Saltpetre, like nitrate or soda, is imported
from South America, but nitrogen is not
its only valuable constituent; it has pot-
ash also, being a nitrate of potash. The
only thing that might come in considera-
tion here is the saltpetre waste of gun-
powder works, but this contains much

rating (19 cents against 17 cents per pound
in nitrate) is that being in ammonia
form, its excess in nitrogen, although not
as readily available, is held by the soil,
and thus saved for plant growth, while
any excess of nitrogen in nitrates would
at once try to make good its escape down
into the soil water and perhaps into the
drains, to be carried away to rivers and the
ocean. There can be no doubt that sul-
phate of ammonia is a good and cheap
source of nitrogen. It can be applied in
larger and less frequent doses than ni-
trates, and will often show remarkable
results on both garden and field crops.
Whenever readily obtainable, farmers
should not hesitate to try its effects on
their crops in a cautious way, beginning
with say 75 or 100 pounds per acre on field
crops, and 200 or 250 pounds for garden
crops.

A SMALL BARN.

In answer to a subscriber, we give the
following plans of a small barn, taken
from "Barns and Out-Buildings," pub-
lished by the Orange
Judd Co., New York:
The barn, the outside
appearance of which
is shown in the illus-
tration, in its arrange-
ments, obviates the
necessity of going be-
hind the horses when
feeding, which is
often desirable, as in
families having no

hired help, the feeding is sometimes in-
trusted to children. The ground floor,
Fig. 1, is eighteen by twenty-four feet,
and eight feet in height. The carriage-
room, C, is thirteen by eighteen feet,
with sliding doors ten feet wide. The horse
is led through the door, D, from the carriage-
room to the stable. The box E, contain-
ing food, connects by two spouts with
grain-bins in the loft. The hay-chute is
shown at S, and is between the mangers.
The harness-closet, H, is placed under the
stairway. A window, W, gives light to
the feed-room and the stalls. The loft,
Fig. 2, is six and one half feet high to the
plates, and with a three quarter pitch to
the roof, there is ample room for hay and

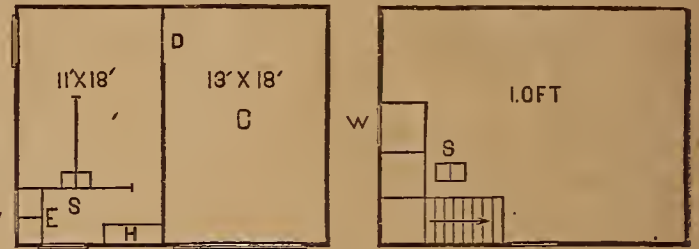


FIG. 1. PLAN OF SMALL BARN.

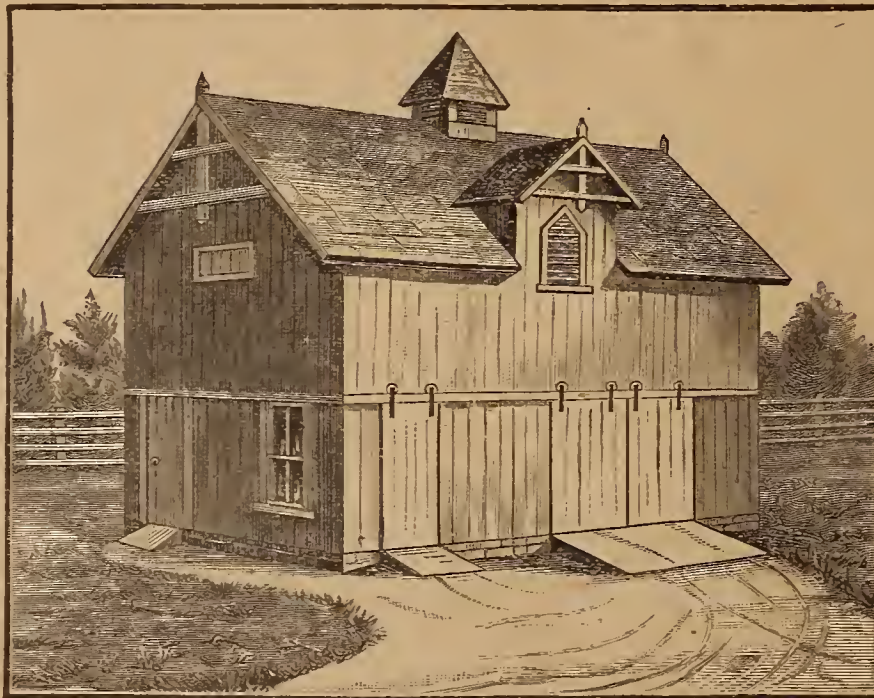
FIG. 2.

lent meals at home; but things were
different in many ways at the eating-
house, and there being plenty of time (the
connecting train was an hour late), I fol-
lowed the example of my companion (a
good feeder) and ate of almost everything
offered or passed. At last came the
dessert, which was brought around by the
mulatto waiters on trays. It consisted of
two kinds—a wine jelly of bright cherry
color, and golden custard with white,
floating islands, both contained in beau-
tiful, cut-glass custard-cups. I had eaten
floating island at home, and knew how
good it was, so I was bound to have it. I
had never eaten wine jelly, but wished to;
so with a cheekiness that surprised me at
the time, I told the waiter I would take
both. He seemed surprised, but grudg-
ingly gave me one cup of each, and then
turned away and remarked audibly to a
fellow waiter, "D—d little hog." In these
days no waiter would venture such a re-
mark, or, if he did, would be reported and
get the grand bounce; but things were
different in '53. Now, one may order cake,
pie, pudding, nuts, ice cream and water-
melon, and scarcely an eyebrow will be
raised at the wholesale indulgence.

There is one hotel practice that I think
might be introduced with favorable re-
sults in every family in the land, and that
is the practice of commencing breakfast
with fresh, ripe fruit. To the majority of
children and very many grown people,
breakfast is the most unpalatable meal of
the day. It is the poorest cooked and
waited-on meal at hotels. Many times
have I sat down to a hotel breakfast, after
attending a farmers' institute or reporting
a convention the night before, with little
or no appetite, and the dreary bill of
"steak, bacon, calf's liver, mackerel or
sausage," did not encourage it in the least;
but the eating of a juicy orange or the
half of a delicious cantaloupe, put a
different tone into my system, and "re-
moves" that seemed unendurable half an
hour before were appetizing in odor and
flavor. We have never put the system in
practice to any extent, at home, because
through the summer fruit of all kinds is
so plenty that we become almost surfeited;
but it would be different in all families
except those of commercial fruit growers.

In traveling, one often hears the remark,
"I am not feeling very well; I guess I eat
too much." Traveling is hungry work,
and through lateness of trains, economy
in lunching, or other reasons, persons sit
down to a hotel table and an attractive
bill of fare, it is not difficult to eat a little
bit too much. If a person is liable to any
little error of this kind, a very simple
precaution will largely discount the bad
effects.

Perhaps this article will reach the eyes



A SMALL BARN.

more potash than nitrogen. It analyzes
about 2 per cent of nitrogen, and 20 per
cent of potash, and is worth at station
prices about \$1.50 per 100 pounds, or \$30
per ton.

MONEY VALUE OF AMMONIA.—In sul-
phate of ammonia we have a valuable by-
product of the gas works. It looks some-
what like coarse salt, and not being quite
so ready to absorb moisture and melt
away, or to form large, solid chunks that
have to be broken up, like nitrate of soda,
is much more convenient to keep on hand,
or to handle, or to mix with other fertiliz-
ing substances. I have sometimes used it
on vegetables, and often thought it gave me
just as good results as the nitrate of soda.
An average sample contains 20 per cent
of nitrogen, and this is rated in the sta-
tion schedules at 19 cents per pound, so
that the 400 pounds contained in a ton
make it worth \$76, at which rate, and
sometimes cheaper, it may be obtained
from dealers. The reason of its higher

straw. The barn is built of hemlock,
sided with seven-eighth-inch dressed
boards, twelve inches wide, and battened.
It cost, complete and painted, about two
hundred dollars.

HINTS ABOUT MEALS, BOTH PUBLIC AND PRIVATE.

It is not always true that what every-
body does is the best way, but at the same
time it is generally true that wide-pre-
vailing practices and methods have con-
siderable foundation in experience, and
are the result of some actual needs. Some
of the practices at the leading hotels are
such results, and may be introduced, to
some extent, in the private family, even
if that family be only a farmer's.

A novice is often bewildered in the
multiplicity of dishes on the bill of fare,
and doubtless many wonder why so many
are cooked and offered. The reason is
that guests differ in their tastes. Experi-
ence proves that of a hundred guests a

of some who are not *au fait* in the manner of ordering a dinner, and a word more might be of service. At dinner, soup and fish are generally ordered together, and always first. While the waiter is after these, the guest is expected to look over the bill of fare and be ready to give his order for the balance of the dinner proper. Meats, entrees and vegetables are ordered together. If anything is omitted by the waiter or overlooked by the guest, the waiter can be asked to get it; he is there for the purpose, and the guest has a right to any service in his line.

In ordering dessert, the general custom, founded, in a measure, upon digestive requirements, is to eat fruit first, then pastry and pudding, finishing with ice cream, Roman punch or water ico and strong coffee. Nuts can be eaten at any time during the meal; I generally avoid them, as they are often old and unwholesome. In eating fruit in connection with dinner, the best is that which has the most juice in proportion to its food constituent, the object to be aimed at being to make one part of the dinner complementary to all the others. If we take them as an aid to digesting the balance of a dinner, fruits take precedence in about the following order: Oranges, water-melons, pears, peaches, apples, bananas. If we eat them for their food value, the list should be reversed.

At breakfast, fruit is served first, and occupies the time while a portion of your breakfast is being cooked. Griddle-cakes are baked to order, and it is customary to eat them last at breakfast or supper. Sauce of some kind should be served with supper, and if it is not brought or offered by the waiter, it may be ordered at any but the very cheapest hotels.

The final course at the best hotels is finger-bowls and an extra napkin. These are used by dipping the fingers into the bowl and wiping on the napkin. If it is desired to wash the lips or moustache, water is conveyed in small quantities with the first two fingers. The napkin should be retained in the lap until the last thing before rising, and then laid upon the table so as not to scatter the crumbs it contains. Guests are not expected to refold the napkin.

Summit county, Ohio. L. B. PIERCE.

THE VEGETABLE GARDEN IN CALIFORNIA.

One who understands gardening could hardly hit upon a more remunerative occupation in this state. There are many good openings where one can have good soil and water. There are few points in this state where one can make a full success with small fruits and vegetables without a constant supply of water. With it there is no reason for failure on account of crops, and there is a market nearly every place.

Nearly all the old settlers of this state are what we may call wholesale people. What they do must be a part, at least, of something big. If they have a ranch, farm, dairy or orchard, it must be larger than their neighbor's, and they must have it all pretty much in one thing, so as to outstrip their neighbors. For instance, right here in Sonoma county there are scores of dairies, with the best of soil and climate, with perennial springs above them on the hills furnishing water enough to irrigate a dozen kitchen gardens and berry patches, but the owners have lived there for years and years without raising a thing on the place except cows, hay, and perhaps pigs and poultry, without a fruit tree or berry plant, or even a potato on the place. Some of them have fine shade trees, lawns and flowers, but no fruits or vegetables; they go to town once or twice a week and lay in a supply if they wish to. Scores of general farmers, with everything else around them in plenty, often grow no vegetables whatever; many of them no fruits, even.

Then again, the people of the smaller country cities, like Petaluma and Santa Rosa, though they have plenty of the richest soil and a climate in which they can grow everything to perfection, and have choice vegetables fresh from the ground every day in the year, grow hardly any vegetables. Nearly every one has a beautiful lawn and flower garden assiduously watered and cultivated, with rare, choice

trees and fruit trees. I think I may safely say that there is not a county in the nation that has four little cities in it with such beautiful and carefully-kept door yards as Petaluma, Santa Rosa, Healdsburg and Cloverdale. Yet Sonoma county is far ahead of any other portion of California that I have seen (and I have seen it about all) in the number of its private kitchen gardens. "It makes me tired" to travel through the state and see such a lack of enterprise in this direction.

Such a country cannot help being the place for "money in the garden." There are quite large towns in the interior, with the best of soil, water and climate, to which all the vegetables are shipped from remote points by rail. There are great summer resorts where everything is perfect for the market gardener, that depend on the city market for their supply. The city, which means San Francisco, is usually well supplied, but even directly around it there are good openings for the market gardener. At a cost of fifty cents to one dollar, a ton of produce of any kind can be placed in the store of your city commission man. There is scarcely a city or large town in the state that has a full supply of small fruits and vegetables, and there are openings everywhere.

There are several reasons why, heretofore, so few of these things have been grown, the greatest one being that there is no part of the state where they can be grown as a business without irrigation. Of course, one can grow an early spring crop of truck here as well as anywhere, and also to some little extent where there are moist winters in the interior, but when the spring rains stop, garden truck stops growing. Private irrigation was expensive and troublesome; the farmer had all he could attend to doing something big that brought in big bags of coin, and he had no time to look after garden "sass," so he learned to do without, and he is still doing without, except what he buys.

Truck gardening was early taken up by Italians, Portuguese and Chinese, especially Chinese. The latter are a kind of under stratum in society everywhere, but they work, and can live on nearly nothing and in nothing; and where they have a strong foothold they are a hard class to compete with. But there are not enough of them to go around; that is, there are plenty of openings they have not filled. These people do not, as a rule, take to small fruits. Where they are in the business, it seems to lower the profession, and white people are inclined to stay out. The corner-stone of this great republic is labor. Labor has made us what we are—the greatest nation on earth, and no coffee-colored people from any country should be allowed to debase manly and womanly labor, whether it be picking cotton or growing turnips.

Independent farm and garden labor, self-supporting on small farms, is what California needs above all other things, and no state or country in the world will give such labor a snorer or better return. She wants a thoroughly mixed husbandry. Heretofore, things have been run too much in ruts. There were thousands of acres with nothing but wheat, hundreds of acres with nothing but potatoes, hundreds of acres with nothing but prunes or oranges. This does not make a rich country, but it does make a few rich men, if things happen to hit right.

Every rural occupation pays well in California—better than anything else. It is mainly independent. But it should be general farming, fruit growing or trucking.

D. B. WIER.

HOW TO SAVE SEED CORN.

I pick my seed corn as soon as the corn is fit to cut up. I husk it and lay it in the chamber to dry, and I do not care if it does not get so very dry. Then, when the weather gets cold, I box it up and put it in the cellar. If you have a mouse-tight cellar, it can stand in open barrels just as well. I have tried it six years, and it has not failed me once yet. And another thing, it will come up quicker than corn kept bone-dry all winter. I also find it much easier than the old way of saving it.

Minnesota.

G. T. WILTSEE.

LET US CONFESS TO ONE ANOTHER.

Sheep raising in the United States has never been a very stable industry. It has generally been on the extremes. There have been big and sudden fortunes in the business. It has been very speculative. Many causes have conspired to make it so. It may remain so, but the inclination to diversify and better understand the neglected fitness of sheep to situations and purposes will, it is believed, lead to greater stability and success.

There is a tendency to make the fleece secondary and meat primary. It is more speculative than is proper, but such meets the trade forcibly now. They are calling for size of carcass, as if that was all there is to be gotten to meet the call for mutton. The British mutton breeders are improving their opportunity by furnishing rams to use on Merino and grade flocks. This is all right. Merino ewes are being crossed with these black faces—no matter much which variety—for the purpose of mutton. Stannich, old Merino breeders are resorting to this cross to make money. It is all right in results. The money is proof that it pays. No one need hesitate or complain, provided that it makes money.

Such Merino breeders as Hon. Columbus Delano, Mt. Vernon, Ohio, president National Wool Growers' Association, has gotten a black-faced ram to use on his farm. This is a pointer and tells its own story.

Of all these British breeds, very few of them go to market as fat wethers. The demand for rams takes all the best animals. Ewes, too, are more valuable as breeders than for the shambles, and are held in the flock too long to make best mutton. Only the grades and scallawags go to the butchers.

Grades, though, are in prime demand, and if the faces and legs have a black or brown color they pass muster without a word. It is all Southdown mutton if the color is right.

It is a fact that wool growers have had a hard time of it, especially if they had little, gummy, wrinkly Merinoes. Besides the fact that there is a prejudice against such mutton, there is the fact that farms stocked with such sheep have been overstocked; therefore, the sheep were in thin, crowded condition and would not sell for any purpose. Under such circumstances, sheep are neglected and get poor; diseases, usually parasites, get the upper hand and the situation is most pitiable and disgusting. If sheep are paying stock they are better cared for and are more healthy and free from parasites, inside and out.

Wool growers have had a hard time of it. There has been an effort to legislate the price and thus dodge the law of supply and demand, which has to govern the price of everything. It is a fact that those "cranks" who have crossed their Merino ewes with larger breeds, and judiciously sold the produce of the cross, have made money. It is a fact that mutton raising has paid during the last four years, and such men have not been complaining of hard times. All the complaining has come from those who had and used Merinoes only as wool producers. It is gratifying that flocks of Merinoes which have been bred and improved in the direction of mutton have been making money all the time. Notably among big Merinoes are the Washington county, Pa., Delaines, Black-Tops, Improved Black-Tops and the Dickinson Delaine Merinoes. A fierce prejudice has been against these sheep because they had Merino fleeces on their backs. But, they had Southdown carcasses under their hides that please the city butchers. Any well-formed, compact, well-quartered sheep, carrying its flesh in the right place, smooth, plump carcass, full of savory, luscious meat, weighing 140 to 160 pounds in ewes and wethers, or rams from 170 to 200 pounds, will always be in favor with the butcher. For the grower, the more wool the better, and as these have an average of seven to nine pounds of brook-washed wool, there is no complaint of them even as wool producers when washed wool fetches 34 to 37 cents per pound. On high-priced lands, where feed and living expenses are too high to raise sheep for wool, there need

be no discouragement if mutton sheep pay. Mutton always sells for some price and has been selling higher than beef. If mutton always sells, a man cannot be overstocked and eaten up by sheep when wool is below the cost of production, as it has been in Ohio, Michigan, Wisconsin and Illinois.

It is true that on the cheaper ranges of the West, where they were not overstocked, wool growing has paid far better than cattle; this points to the cause of complaint. It has cost too much to raise wool. It is a curious but stubborn fact that mutton sheep have, by cheap railway transportation, been coming from the far West and selling as fat sheep in our markets for a good price. And it is an astonishing fact that big fortunes have been made by bringing these range wethers to Kansas, Nebraska, Iowa, Missouri, Wisconsin and Illinois, and feeding them cheap corn and hay. It has been immensely profitable, and while wool growers have been growling and growing poorer, these shippers have been feeding these same sheep and finding fortunes.

Mutton-lamb raising is the neatest, quickest, cleanest, surest way of converting time and cheap grain, bran, oil cake, turnips and hay into money.

Good sheep, properly fed, will make good mutton. It is the way to do it and no one need try any other. * * *

MUTTON SHEEP.

There has been a wonderful awakening during the past twelve months in the matter of sheep breeding; and while this has extended to almost every branch of the trade, the heavier carcassed breeds have, naturally enough under the existing circumstances, been the chief beneficiaries. Prices received for the best grades of fat muttons in this market have been so uniformly satisfactory—as compared with the values of beef on the hoof—that farmers and feeders generally have begun to turn their attention at last to this of late much-neglected branch of stock rearing. Word comes from Mattoon, Ill., that Coles county feeders have within the past week received 5,000 head of young sheep from south-western Kansas and Montana ranges, to winter on the cheap corn so abundant in that section, and from various other quarters the information is conveyed that sheep feeding is to constitute a very important industry during the winter months. Owing to the comparative scarcity of good grades and crosses of the various mutton breeds, feeders are, of course, compelled to purchase "stores" from the far West, but how much greater would be the returns from the grain to be consumed if adequate supplies of better-bred animals were available. The *Gazette* believes that in the judicious breeding of pedigreed sheep of the distinctively mutton sorts there is room for a very wide extension of interest with profit to all parties concerned.—*Breeders' Gazette*.

HOW AN ENGLISH FARM HAND FARES.

What would the average "man help" in our country towns think if he was required to work as many hours as the "hand" on an English farm? Probably he wouldn't condescend to think about such a ridiculous subject. He would simply not work, that is all there would be to it. But the average English laborer is not so independent, and some Americans who have been rusticated in the typical English cottage on a big farm, forty miles from London, this summer, have had their compassion greatly excited in his behalf. "Old Joe" walks two miles from the village every morning, to be promptly at work by 5 o'clock. He never leaves off until 9 o'clock, and for these fifteen hours' labor, of the most laborious sort, he receives twelve shillings, or \$3 a week! A slave's life compared with this free Briton's is one of luxurious ease, yet, in spite of all, "Old Joe" has managed to celebrate his seventy-fifth birthday. A "Labor day" would be a stupendous farce for this poor old soul under the circumstances.—*Boston Herald*.

J. S. PARKER, Fredonia, N. Y., says: "Shall not call on you for the \$100 reward, for I believe Hall's Catarrh Cure will cure any case of catarrh. Was very bad." Write him for particulars. Sold by Druggists, 75 cents.

Our Farm.

GARDEN GOSSIP.

BY JOSEPH.

PRESERVING POTATOES FOR SEED.—The yield of potatoes depends so much on the perfectly sound condition of the seed tubers, that it is worth the greatest efforts to find means of preserving the potatoes, which we wish to plant next year, in just such perfect condition. Perhaps this may be done in cold storage; that is, in a room arranged for the purpose under an ice chamber. It is a plan that should be very thoroughly tested, but, of course, the tubers must be protected from exposure to any temperature approaching freezing.

It seems to me that the importance of this subject should commend it strongly to the state experiment stations for investigation; certainly, a part of that \$15,000 appropriation which each of them does away with every year, is expended in experiments of much less practical value and importance than those needed to settle the query how best to preserve seed potatoes.

It is not improbable, however, that there are ways still much simpler and more convenient and practicable for the average farmer than cold storage. A correspondent of the New York *Tribune*, for instance, tells of one of his neighbors, who, last fall, when potatoes were so cheap that they could hardly be given away, placed a quantity in the bottom of his silo. They were imbedded in and covered with chaff, and the silo filled with corn fodder in the usual way. When the bottom was reached, late in spring, the tubers were found to be as sound and solid as the day they were put in.

I have no silo, but propose to put a one-foot layer of potatoes into a pit dug three feet deep, cover with a foot of chaff, with a board cover on top and upon this soil to the depth of two feet. This will be left until June, and the tubers, if all right, taken out and used for planting.

STORING ONIONS.—The same paper also tells that a few Red Wethersfield onions had been accidentally left in a deep box standing on the cellar bottom. They were covered with two feet of buckwheat chaff, several old rugs, old boxes, etc., and came out on July 1st as good as new. Here we have some suggestions that may aid us materially in finding means of preserving vegetables in good condition until spring or summer. These plans are worth trying.

STORING CELERY.—How to put up celery so it will neither wilt and become next to worthless, nor freeze and rot, is yet one of the problems that seems to bother both the home grower and many of the market gardeners. People who have a hot-bed or hot-beds cannot put them to better use during winter than for the storage of celery. The great advantage of this method is that you can get at the celery at almost any time you wish. Throw out the soil and manure, except enough of the mixture for a three-inch layer. Begin at one end of the bed, as shown in the illustration, set up the plants against the end board, closely and compactly, in a row eight or nine inches wide, and here adjust a board nine or ten inches wide across the bed, say six inches from the bottom. Set up plants against this in a row of same width as before, and adjust another board. Continue until the frame is filled, and then consisting of a number of sections or apartments eight or nine inches wide, and of the length of sashes (width of bed). Board partitions are put in merely to prevent overcrowding and consequent heating of the plants. The loam in the bottom of the bed should be pretty moist, and if too dry, must be watered (a section at a time, just as finished) from below the board partition, carefully avoiding wetting the foliage.

For the first few days the bed is kept covered only with board shutters; afterwards, these are taken off, and loose, dry straw piled directly upon the celery tops until the bed is filled entirely up. The sash or sashes are put on next, and the shutters on these. In extremely cold weather, the bed may be further covered with mats, straw, or in any manner to keep out frost.

TOMATO PRESERVES.—I have little use for yellow tomatoes, and if I grow any of them, do so only for variety's sake, or to test a new-comer. One of our friends (from North Carolina) asks me to name the best variety for preserving, this to be yellow-fruited and of medium size. I think that Yellow Plum (also named Green Gage and Round Yellow) will fill the bill. It is about two inches in diameter, round, smooth, and otherwise pretty good. My friend will have to look the seed catalogues over quite closely, in order to find out where seed may be had. Perhaps Mr. Gregory catalogues it, but I am not so very sure. I also think that the new Peach tomato, although of a dark red when fully ripe, would answer very nicely for this purpose. When first beginning to color, it may very easily be mistaken for a peach. It is round or flattened, quite handsome, and averaging one and one half inches in diameter in any direction. It grows in clusters, but seems rather late.

GARDEN NOTES FROM NORTH CAROLINA.

I have immense success with Limas, and am happy to report that the Dwarf or Bush Limas are doing finely. Of course, I can't say how long they will wear here in the mountains. They are, however, inferior in quality, and taking into account their small size, I am not sure but I shall drop them again, and keep on furnishing fifteen-foot poles as usual.

Referring to Joseph's notes on cucumbers, I think he will have no trouble if he will make boxes of siding and cheese-cloth. I let these boxes remain over the hills until the plants begin to raise the cloth; then take them off, thin to four strong plants per hill, and draw the soil up around them for support. The few

eight inches of each loose, and forming a kind of switch which can be applied over and around the branches of the tree and drawn through small spaces, such as small forks, in which the nests are generally located. By proper and expert handling these swabs can be applied to the caterpillars in almost any situation. The vessel of strong suds being carried from tree to tree, he finds it not a very difficult job to apply the suds to the nests, and he warrants every one of the caterpillars to die immediately after the first thorough application. Every man that has a farm should see that all nests are destroyed, whether on fruit trees or on wild cherry or plum trees, wherever formed.—*Popular Gardening.*

TRAINING GRAPES.

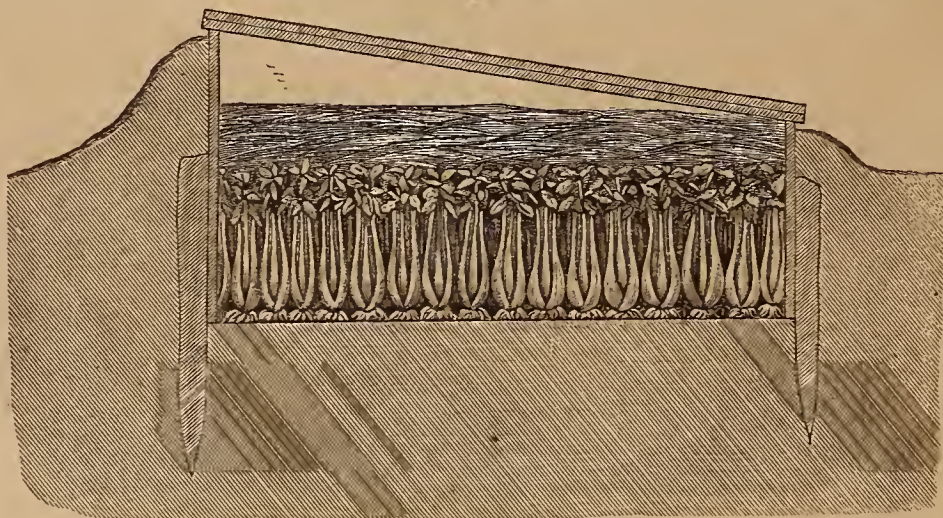
It is impossible to obtain fine, large, perfect bunches, except from strong canes, hence it is necessary to renew each year from the base of the vine, and this is about one of the hardest things a vineyardist has to accomplish. I believe that the vineyard of the future will be managed as follows: Instead of planting vines 12x12 feet apart, they will be planted 6x12 feet. One half the vines will be allowed to bear fruit, and the other half only be allowed to raise young canes for next year's bearing wood, alternating each year. I believe by some such system finer fruit could be obtained than by the usual process now pursued.—*J. S. Kidder, before the Missouri State Horticultural Society.*

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Juneberry, Where Obtained.—J. H. Hosper, Iowa. The Success Juneberry is sent out by Green's nursery, of Rochester, N. Y., and by J. T. Lovett, of Little Silver, N. J.

Black Knot—Tartarian Cherry.—T. R.



STORING CELERY.

bugs that come after this I hand-pick from five to six A. M., and always with the result of furnishing my unsuccessful neighbors with bushels of my surplus.

I have introduced "Kaffir corn" here, and it is fast taking the place of corn and wheat. If you have not tried it, do so by all means, if only for the satisfaction of having the most delicious pop-corn ever invented. CLARENCE BURKE.

Macon county, N. C.

[Kaffir corn is too late for western New York, and of not much value even for New Jersey, as I found difficulty in getting it ripe where late varieties of field corn ripen early in August. I have not tried it for popping.—JOSEPH.]

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

THE FALL WEB WORM.

The second brood of the fall web worm often appears in much larger numbers than the first, and although, owing to the greater amount of foliage, and its much more rapid growth at this time, the injury may sometimes not be so conspicuous as that resulting from the first brood, no orchardist should neglect to destroy every one of the caterpillars he can find, with the view of lessening future attack. Prof. A. J. Cook tells to the *Western Rural* his method of destroying caterpillars by applying strong soap-suds to their nests. He provides himself with one pole long enough to reach the highest nests, and another shorter one. At the small ends of these he has fastened a piece of strong cloth in such a manner as to have six or

this is usually the case in buying plants from greenhouses, as we have done from several firms. Now, the question is, is this clay a fertilized earth, or is it common soil, and if of common soil why is it of such a poor, barren character?"

REPLY:—It is true that occasionally very barren looking clays produce some of the best crops, and this is particularly true of roses and to some extent of strawberries, yet most growers prefer and use a dark-colored, clayey loam, with plenty of rich manure in it, for rooting strawberry runners. It may be the color you speak of is attributable to some peculiar formation in your locality. I have handled very many potted strawberry plants from many nurseries and most of them have been potted in dark soil, although it has generally been packed into a clayey lump around each plant. There is no mystery surrounding the rooting of strawberry runners in pots. Have the mother plants growing thrifflily, put good, rich soil in the pots and keep it moist and the plants will root freely.

Fertilizers for Fruit Trees and Vines.—J. C. Palestine, Texas, writes: "Please tell me how much bone meal to put around fruit trees or grape vines. Do you put it around the roots or on top of the ground and work it in, and what season of the year do you use it, and how often?"

REPLY:—Use about half a pound for a four-year-old apple tree, and for trees spreading twenty-five feet use three pounds. For large grape vines use about as much as for a large apple tree, and so on in proportion. No definite rule can be given, but the amount generally used is not far from 800 pounds per acre. Bone meal is what is called a lasting manure; that is, it remains a long time in the soil before it is entirely dissolved. Now, as a rule, some of the high-grade, ammoniated superphosphates will give quicker results and are often, on that account, cheaper to use, as the immediate return from their use is larger, but perhaps bone meal can be bought very cheap with you, when it should be used abundantly as a most excellent fertilizer and every year. It should be applied in the spring, and should be cultivated in about three or four inches deep. The rains will then wash it down to the roots. At that depth in the soil it is in the best possible condition as regards permanent moisture and free access to the air for decomposing it, and making it into plant food.

Fertilizer for Strawberries.—"Novice," Winnsboro, La., writes: "I have a plot of ground which was originally fairly fertile, but which was very flat and rather cold and cloddy. Plants did not grow well until late in spring, and then only when the soil had been well drained. The subsoil is a close clay formation. This plot has been a stable lot for many years and is well fertilized with animal droppings. I want to make a strawberry patch of it, to be set with Crescent seedling as the main variety, and Crystal City as the fertilizing variety. I live a long distance from transportation, but cotton seed, raw ashes, muck from bottoms of ponds, woods mould and cow and stable manure are plentiful and can be obtained at small cost. What preparation, under existing conditions, would you advise for the plot before setting the plants?"

REPLY:—I would suggest that you use plenty of well-rotted, horse manure and wood ashes as fertilizers. Horse manure is light and will tend to lighten the soil, and in connection with the wood ashes will start chemical action, which will make the soil loose. It would also be good to use such material as leaf mould on the land. It is hard to say how much you should use without knowing more about the land, but, if I could afford it, I should use wood ashes at the rate of twenty-five bushels per acre and use about ten cords of stable manure per acre. In these two materials you have the very best manures that are known, and when properly combined they are excellent fertilizers for any crop. You can hardly get your land too rich for strawberries.

Scale in Oranges.—W. H. G., Pearlville, La., writes: "Some of the orange trees in this region are affected with a serious disease or blight, the precise nature of which is not well understood. The affected trees are mostly young, bearing ones, five and six years old, and they presented a thrifty and healthful appearance until this season." The disease first manifests itself by the leaves on the lower branches turning yellow and falling off, leaving part of the tree bare. The orange is about half mature and is partly covered with a brownish scale or rust, giving the fruit a dingy appearance. This scale or rust affects only the skin of the fruit and does not reach the pulp. To the ordinary eye no insect can be seen that would cause this disease, but that the trouble is the work of some minute insect is not improbable. The affected trees present the appearance of being frosted or partially killed by cold, and it is feared that further progress of the disease will have the effect of destroying them altogether. All fruit on the trees will probably mature, but will not appear bright and fine, and hence brings a much less price in the market."

REPLY:—Your orange trees are probably troubled with one of the numerous scale insects, and not by what is generally called orange rust, although this, too, is the result of an insect. There are so many kinds of insects attacking both orange and lemon trees, that it is impossible to tell what one is now at work on your trees. You had better send a specimen of infected leaves, fruit and twigs to the entomologist of the Department of Agriculture, at Washington, D. C., and he will give you the true name and remedy. In 1885, H. G. Hubbard made a report to the commissioner of agriculture in which he described the different insects affecting the orange, and also gave remedies. You can get this from the department in Washington, probably. The agricultural report for 1889 also tells of successful remedies for these pests. Mr. H. G. Hubbard recommends the following emulsion for the orange scale: Kerosene, two gallons; half a pound common soap and one gallon of water. In mixing, first dissolve the soap in the water, then add it to the kerosene, which should be warmed first. These ingredients should be agitated together in a churn or by a force pump until they form a homogeneous, creamy mass. Dilute this by adding nine times as much water as the mixture. Thus, the above formula will make thirty gallons of syringing material for the trees. It has been found very effective on orange scale insects.

G., St. Paris, Ohio. Yes, the black knot attacks all kinds of plums and also the choke cherry and the cherry.—The black Tartarian is considered a desirable variety of cherry for central Ohio.

Pruning Walnut Trees.—J. H. C., Jackson, Mich. Prune after the growth stops in the fall and until the sap runs in the spring. Do not prune while the sap is running freely. Cover all wounds of over three fourths of an inch in diameter with coal tar.

Wash for Fruit Trees.—L. J., Canton, Mo., writes us that the following wash has been of much service in protecting his fruit trees from borers and other insects: One gallon soft soap, half a gallon tobacco ooze, four ounces carbolic acid, one pound sulphur. Mix well and wash twentieth of May and twentieth of August of each year.

Mulch for Berry Patches.—O. M. writes: "What is the best way to keep berry patches rid of grass? Would sawdust be suitable to use?"

REPLY:—I should be afraid to use sawdust in very large quantities for the purpose you mention, but is well worthy of trial on a small scale. I have used the refuse straw from hat shops for the purpose, and it worked admirably.

Pear Blight.—Mrs. E. C. F. J., Virginia. As yet there has not been discovered any cheap remedy for pear blight. The plan you had better pursue consists in cutting off the branches as soon as the blight shows itself; cut off so low that you will remove all the diseased wood. Do not apply much stable manure, but use wood ashes instead. This will tend to ripen the wood. Every precaution should be taken to keep the tree in perfect health, so that it may successfully overcome the damage done by continual pruning. Pear blight seldom remains continuously in one locality for a long time, but we have seasons, sometimes several years, when it is very bad, followed by immunity from it for a few years.

Pot-grown Strawberry Plants.—J. D., Salina, Kansas, writes: "Looking over catalogues of fruit men we notice that they always recommend pot-grown strawberries. In buying them we find each plant imbedded in a little, hard lump of what seems to be clay;

Our Farm.

CROP ROTATIONS.

Our rotation is clover, potatoes and wheat. Then clover with a little timothy is sown on the wheat again. A few years ago the rotation practiced was:

1. Clover and timothy.
2. Clover and timothy.
3. Wheat.
4. Potatoes.
5. Early potatoes.
6. Wheat, seeded to clover and timothy.

The clover sod and good tillage brought as large crops of wheat as could stand up, without manure or fertilizer. Then all the manure was put on for potatoes. What the potatoes left and thorough tillage insured another large crop of wheat. This rotation was followed for some time with paying results. Clover was sown on wheat, and plowed under for the following potatoes, and rye on potato stubble and plowed under for next crop. But I consider the short rotation now practiced (three years) as best. In one respect it is necessary, as we cannot now keep land in clover two years in succession on account of the clover-root beetle. Nor do I now want to. The clover yields the largest crop of hay the first year. At the end of that year it has made the largest growth of roots possible; then is the time to end it and grow a large crop of something else, if one wants to make the most money possible. Again, it is no longer safe for us to put fresh manure on land for potatoes, and I want to put it out before it rots. So we want the clover sod to grow the potatoes now instead of wheat. Also, it isn't best to grow potatoes (or any other crop) two years in succession on the same ground. With our old rotation we only had to get off potatoes in time for wheat sowing from half the wheat ground, as half came after clover.

This was a great help. But I decided to do the best way and take the straight three years' rotation, although it gave us a hard pull to get the potatoes dug and stored in good season for wheat sowing. We put in the cellar, yesterday, 300 bushels of potatoes, making 1,200 now in, and there are some dreary days ahead yet, before we can ride our Cutaway harrow at our ease. I am writing this before breakfast, little by little each morning, as working hours are precious just now; so please excuse any lack of connection.

Now, with my new rotation the rub was, where to put my stable manure. I took the risk last year, and put it fresh on the clover sod for potatoes. I paid dearly for the job. We had to pick over by hand 1,500 bushels of potatoes, and take out some 200 of the worst scabby ones. On a field without stable manure the potatoes were nice and smooth. I am done with that kind of business. But one of the strange things is that neighbors on each side put fresh manure on potato land and it did not produce scab. Did my cement floors and covered manure-shed have anything to do with this?

This spring I put the stable manure, early, onto six acres of newly seeded clover, where I had wheat last year. It was carefully done by the spreader. Then the young clover was cut about the middle of May and left to dry up. The next growth made an enormous crop and we let it ripen. It is full of seed. I expected the manure would cause much trouble raking up with the clover (I cut seed with Eureka mower and rake with a horse-rake, thinking it about as good a way as any); but I hardly saw a trace of it. There was a large amount of straw in it when I put it on; but it seems to have decayed, giving the surface of the field a darker, richer look than it had in the spring. It would not have answered, probably, to have cut this lot for hay; but while handling the clover so as to dodge the midge and get a crop of seed, I got my stable manure nicely rotted on the surface, and I think without any loss to speak of. I am rapidly getting my eyes open as to the value of manure, or even straw, on the surface as a mulch, aside from the amount of fertility it actually has in it; but I cannot stop now to give my experience.—T. B. Terry, in Rural New Yorker.

EXTRACTS FROM CORRESPONDENCE.

FROM TENNESSEE.—Morgan county is situated on the tableland of the Cumberland mountains, commonly known as the Cumberland plateau. It has an elevation of about 1,500 feet above the sea. The climate is one of the healthiest in the United States. The plateau is free from all kinds of malaria and intestinal diseases. No case of consumption has been known to originate on it. Mosquitoes are unknown. The winters are mild. People from all parts of the United States are here.

Kismet, Tenn.

B. L.

FROM KANSAS.—The chilly winds of autumn are at this moment sweeping over the corn fields here, and the rattling of the dry leaves is growing to be monotonous. Corn huskers are busy on some of the farms and report a good yield of well-filled ears. Changing in at one of the neighbors, I spied on the mantel shelf two monstrous ears of corn, one fourteen and the other thirteen and a half inches long. Oats now bring from 12½ to 17 cents per bushel and corn about 17 cents. There is talk of a farmers' alliance here, and I hope the people will be united enough to make it a success if there is one started. There certainly will be no chance for farmers to get into any better condition than they now are until they band together and then stand by one another.

Scottsville, Kan.

A. P.

FROM WEST VIRGINIA.—Berkeley county is situated in the northern end of the famous Shenandoah valley. We have a delightful and healthy climate. The land, while varied in character, is wonderfully productive. It is generally either of slate or limestone formation. The former kind is easily susceptible of improvement and yields abundant crops when properly cultivated. Of the limestone soil of this valley, it is sufficient to say that everything planted grows, and neither growth nor yield can be excelled. The crops this year are good. Fruit did not yield as much as expected, but a fair crop has been gathered. Our farmers are waking up to the fact that it pays best to have the best breed of horses, cattle, hogs, etc. Our people are hospitable and kind, and there are no ill feelings towards newcomers. And all who are inclined to come into our midst are welcomed, and they will find as good land as in any other part of our great country. We have the great B. & O. railroad running through Martinsburg, the county-seat. Being the end of the first division, we have their large repair shops, that employ about 400 men. We have also the Cumberland Valley railroad running to Winchester, Va.

Martinsburg, W. Va.

J. S. M.

FROM MARYLAND.—Middletown valley has often been called famous. To appreciate the full force of the picture, one must imagine himself standing on the national turnpike on the summit of Catocton mountain, three miles east of Middletown, a town of 1,000 inhabitants. Looking west from this eminence, a scene breaks on your view, once seen never to be forgotten. It has truly been said by many, "This surely is the Eden of Maryland." The land is somewhat rolling and of the finest quality. Wheat, corn, oats, hay and potatoes are the principal crops grown. This valley is noted for its fine barns, houses and surroundings. During the past few months several expert geologists have been in the immediate vicinity of Middletown, looking at the iron ore found here. This ore is what is known as spectral iron, and is pronounced the finest specimen in the United States. The farmers are quite elated over the prospect of its development in the near future, as the surface indications are that it underlies an area of from 12 to 14 miles long and 7 to 8 miles wide. Our people are a thrifty, hard-working people, depending principally on agriculture for a living. Lands can still be bought near town at from \$100 to \$125 per acre. Capital judiciously invested here in a few years would bring a large interest. There are openings here for factories or any enterprise that savors of good intent, and our people are always ready to welcome such.

Middletown, Md.

E. L.

FROM CALIFORNIA.—I cannot recommend any one to come to California either to hire out for wages or to rent land. Especially is this so if he has a family. To explain fully why this is so would be too tedious; but it is mainly owing to the old mining times, when a laboring man's home was wherever his blankets were; that is, he was expected to sleep anywhere except in his employer's house, and to eat rough fare in the back kitchen. It is also owing to cheap—and good—Chinese labor. It is true that a vast amount of land holders prefer Chinese labor, for the reason that it is generally good, gives no trouble, lives up to its contracts, and don't go off on drunks. A man with a great lot of peaches, grapes or other perishable fruits ripening, who contracts with white labor to gather it, and that labor goes off on a drunk Saturday and don't get back until Tuesday or Wednesday, or don't get back at all, thereby causing a loss of ten to twenty times as much as they have earned, or goes out on a strike at the most critical moment, causing great loss, will stick to the Mongolian as long as he can. For the

"yellow devils," as they are called here, stick to their contracts, do their work exactly right and require no bossing or watching. Others hire Chinese because they can get no others. All of this debases labor. Your hired girl don't want to work in the same block in which a Chinese is employed, nor will she work in the same house where the cooking is done by Chinese in the country. There are parts of the state and neighborhoods where no Chinese are employed, and where hired labor is treated exactly as in the eastern states, but these are the exceptions. Again, a large share of the rough labor here on ranches is done by foreigners—Swiss, Italians, Portuguese, Swedes, etc. These take more kindly to the old-time, great ranch labor than Americans, English, Irish or Scotch. Land is rented here on the same terms as in the East, but the reuter must have more capital. And, as a rule, only grain ranches and dairies are rented; fruit farms very seldom. Lands for other purposes are usually rented for cash. The rent is low. Further, a renter here must have experience in the vicinity to make it pay. Dairies are rented at so much per cow, \$18 to \$25 per head. On grain ranches the renter gives the proprietor one third, delivered. Wages on ranches or farms are higher than in the East, or \$25 to \$35 per month. Teachers, bookkeepers, clerks and salesmen usually get better wages than in the East, especially in positions of trust; but there is an oversupply, and places are hard to get. They go by favor; one must have a "pull" to get in. Merit, experience and eastern testimonials do not count. Rents, provisions and nearly all household supplies are cheap here. I do not believe there is a town in the middle eastern states where a family can live cheaper than they can in Petaluma, and certainly no better place for health and comfort, and no county with better soil than Sonoma, or one which will give better returns to its cultivator. Therefore, the best thing to do for one coming here is to buy from five to twenty acres of land and improve it, or buy a small place already improved, and enjoy the independence one's own labor and that of his

family will give. California's future greatness and wealth will be in her small income producing homes, on which the owner and his family do all the work. This will ennoble labor. These are the facts as near as I can give them. Yet, you may ask, what is the poor man to do who wishes a home in California? His chances here, if he is willing and able to work, are about as good, or a little better, than elsewhere. But if he is too proud to work, and sits around waiting for a soft job at big wages, he is on the fair road to join the ranks of the tramps now marching up and down the land, crying the lie "no work to be had," while work is plenty on every hand for all who will work rightly and well. But I am forced to say in fairness, that the tramp and utterly worthless and unreliable, pretending seeker after labor are so numerous here that a good man must establish a reputation; for those who wish to hire have become suspicious of all. A home here of five to twenty acres, unimproved, costs from \$300 to \$1,500; improved, and income producing, from \$2,000 to \$10,000, owing to buildings and improvements. This is not all of California by any means. I am confident that there are other sections of the state where more money can be made in fruit growing than here, if money is the only thing worth living for. But is it? I think otherwise, therefore I am here. "California on wheels" has been rolling over the railroads east, ever since last winter, showing free to all just what the state can do. Another train of magnificently-appointed cars is nearly ready to start, crammed full of her products, which all who have a chance should see, showing that she is not ashamed to show what she can do. The national grange visits us next month, and will be taken up as a body and carried to every part of the state in a great train of palace cars; carried from where Shasta's crown of snow says to northern, frigid blizzards, "This far you may come, but no farther; California has no use for you," 700 long miles south to San Diego's mild, perpetual summer; and from the Sierra's crest on the east to the great city between the grandest of bays and oceans. California is not ashamed to show herself to these high-bred strangers. But her immense warehouses, filled with golden wheat to overflowing, and immense trainloads of fruits, raisins, wool, wine, hops and barley going east, will show these solid men what she can do, not to speak of the golden oranges that they will see loading the trees, that will require a hundred immense trains to freight them across the Sierras.

Petaluma, Cal.

D. B. W.

\$500.00 Given

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LIVE IT DOWN.

Has your life a bitter sorrow?
Live it down.
Think about a bright to-morrow;
Live it down.
You will find it never pays
Just to sit, wet-eyed, and gaze
On the grave of vanished days;
Live it down.

Is disgrace your galling burden?
Live it down.
You can win a brave heart's pardon;
Live it down.
Make your life so free from blame
That the lustre of your fame
Shall hide all the olden shame;
Live it down.

Has your heart a secret trouble?
Live it down.
Unless griefs will make it double,
Live it down.
Do not water it with tears—
Do not feed it with your fears—
Do not nurse it through the years—
Live it down.

Have you made some awful error?
Live it down.
Do not hide your face in terror;
Live it down.
Look the world square in the eyes;
Go ahead as one who tries
To be honored ere he dies.
Live it down.

—Ella Wheeler Wilcox.

A CHILD OF NATURE.

BY JEANNETTE H. WALWORTH,

Author of "Southern Silhouettes," "True to Herself," "The Silent Witness," "A Strange Pilgrimage," Etc., Etc.

CHAPTER V.

UNA SELECTS HER OWN MASTER.



MR. UPHAM was radiant; Mr. Upham was resigned; Miss Upham was bewildered and the Upham parlor maid was in a condition of supreme disgust.

"The people from Arkansas," as Mrs. Featherston generally called them, in conversation with

Fenton, had been in their own brown-stone front on a quiet street, up in the fifties, for two whole months, and were as yet far from attaining the chief object of their joint lives—getting Una fairly started on the road to learning. It was uphill work. They had no acquaintances. Mr. Randolph Bascombe, the purchaser (nominal) of their property, had given them distinctly to understand that he was not going to stand in the position of their social sponsor, and that they would have to work out their own salvation.

Una had tried three fashionable schools for young ladies, in as many weeks, all to no purpose.

"They're finishing schools, papa, and I haven't begun yet. The very girls that answer their door-bells know more than I do. Why can't I have private teachers of my own—teachers that will be paid to teach me, and won't dare laugh at me?"

"Why not?"

It was regarded as an inspiration on Una's part, and between them all they had concocted an advertisement which let loose upon them a horde of eager applicants for the place, over whom Mrs. Upham presided with a radiant sense of personal importance, while Mr. Upham sat by, resigned and mute.

Una studied them with bewildered anxiety to select the one who would hurry her forward most successfully in her eager pursuit of knowledge, and the waitress ushered them all in with that superior air of condescension which only the menials in the abode of wealth know how to assume at command.

"I say, papa, if I had not promised, I don't believe I'd care if they all turned out like that one. I wouldn't even make a start. It's too much bother."

Una was standing behind the lace curtains of the parlor window, watching the retreating form of the fourth disappointed applicant for the honor of becoming her teacher.

"She was just too horrid for anything, wasn't she, papa?"

"Smelled of beer—bah!" Mr. Upham's face was full of disgust.

Mrs. Upham looked up from the fashion paper, whose columns she was searching for a safe and reliable cosmetic. She must whiten and soften Una's complexion by some means; country life had almost ruined the child.

"Promised? If I may inquire into my own daughter's affairs, whom have you promised, Una, and what have you promised?"

"Nothing very awful, mamma," Una laughed, nervously, and drawing the lace curtains between her and her mother's searching gaze, stood well inside the deep bay window, flushed and mute.

"The drummer lad, wife, the drummer lad

with the handsome face and the winsome smile. Young folks will be young folks, and if Una's fancy for the boy acts as a spur to her ambition, there's no harm done, no harm."

Mr. Upham poured this plea for indulgence into his wife's ear, in a hurried undertone. Una began to look harassed, and his tender heart ached for her. But Mrs. Upham's sense of improved material prosperity had not resulted in making her meek or lowly.

"The drummer lad?" she repeated shrilly. "My child making promises to a poor commercial traveler? Mr. Upham, this all comes of your miserably weak complaisance. Una has a position in society to support. That should be a sufficient incentive to study; she should need no other."

"Hang society! But here comes another batch." They could hear approaching footsteps. "They are coming in two's and three's, now; they will be coming next in squads, then companies and then battalions," Mr. Upham groaned.

But Bab, the parlor maid, just then marshaled in three persons. One of them was a large and florid woman, who, sailing majestically forward, announced herself as Mrs. General Deshay, and launched, without a second's delay, into a descriptive monologue, calculated to impress the new people overwhelmingly with a conviction of her importance. Another one of them was a small, frightened-looking girl, fresh from the normal school, whom Una dismissed with one contemptuous glance, and turned to fasten her eyes on the one of the trio who had entered last and modestly seated himself on the first chair he came to. Una, coming from her covert behind the curtains, walked up to him and looked imperiously down upon his shabby,

"Trust me, my dear child, and I will try as tutor never tried before to make learning a delight to you."

Una revolved on her high, French heels, and sent her raised voice peremptorily towards the back parlor, where Mrs. General Deshay was still setting forth her own claims, vainly and gloriously.

"Papa, send them all away, please; I have picked out my master." She held out her hand to the man in the blue spectacles, and drew him impulsively towards her father and mother. "He says he never has done anything great yet, so may be he will try to build up his reputation on me. But oh," addressing herself suddenly to the new tutor, "it's going to be awful hard work, making a lady of me, I forewarn you of that."

"I am sure," said Mrs. Upham, an hour or two later, when they were eating their lunch with a feeling of relief, which had just been fervently voiced by Mr. Upham, "I am as much relieved as either one of you, but I can't imagine, Una, what made you decide in favor of that poor, brown grub. I should have engaged Mrs. General Deshay, but there is no use my opposing you when your father upholds you in your very silliest fancies."

Una could not tell her mother that she had been drawn to "that poor, brown grub" simply because his voice reminded her of her drummer friend's, so she sipped her tea silently.

"The child made a judicious selection," said Mr. Upham, authoritatively. "I was quite pleased with the fellow when we came to talk terms in the library. He is all business, and puts a pretty stiff valuation on his services. Says he expects, though, to give full value in return."

"I hope he may," said Mrs. Upham, resign-



"Now, Go," POINTING TO THE DOOR.

brown coat, his smooth, freshly-shaven face, almost boyish in its rounded curves, and peered curiously into his eyes, which were protected by a pair of round, blue glasses. His attitude was one of extreme dejection.

"Did you come to see papa about the advertisement?" she asked.

"I did."

He had a nervous trick of twining his long fingers in and out of each other, restlessly. Una started slightly at sound of his voice. It was curiously like Fenton Cooper's, only Fenton Cooper had a quick, masterful way of expressing himself, and this man's utterance was slow and timid in the extreme.

"What is your name?" she asked, abruptly.

"Francis Capers."

"And what great things have you said and done for the great people you have taught for?"

"Nothing, absolutely nothing. I have never taught before, but I am well educated, and I want the position of your tutor. I will teach you conscientiously, miss, if you engage me."

"But you are a man; you can't make a lady of me."

"You are that already, my child," he answered, slowly.

"Oh, no, I'm not. I can't walk nor talk nor dress like the women I see here every day. Oh, I'm awfully stupid."

"Not stupid; perhaps neglected. I think we would be friends."

"I think so, too. I like your voice; it reminds me of a dear friend's voice. I have promised to study very hard for the next two years, but—I don't seem to get started, even. If you will promise to help me and not to laugh at me."

She stood before him with clasped hands, her pretty head held sideways, her deep blue eyes questioning his earnestly. He answered her in a slow voice, full of fervor:

edly, "Now then, perhaps I will find time to do a little shopping. I am almost in tatters, and so are you, Una."

That evening while the Uphams were animatedly discussing the amusement columns, trying to decide whether they should go to hear Irving or Dockstader's minstrels, Mr. Upham voting one against two in favor of the minstrels, Miss Dashwood was entertaining an evening caller.

"At home to no one else, Maurice," she had said, authoritatively, when Mr. Leonard Heywood's card had been brought upstairs by her discreet liveried footman, and then she had swept downstairs to receive with kindling eyes and white, outstretched hands, a man who was barely countenanced in the most indulgent circles of an indulgent age.

"Well!"

"Well."

One was an eager inquiry, the other a mocking rejoinder.

"You have seen them?"

"I have seen them."

"And what do you think?"

"That the game is scarcely worth the candle. The father is a novelty, the mother a handsome, passe' simpaton, the daughter a pretty, little hoyden."

"Nevertheless, I wish you to devote yourself to her."

"Devote myself to her? How can I? The devotion of my life has been offered at another shrine."

Ida Dashwood's fine, straight brows arched themselves impatiently.

"Don't make a fool of yourself. I wish you to assist in her education; that is understood."

"Primary department, primer, copy-book—what?"

"Yes, primary department. I wish you to teach her the elements of a fashionable belle's

career. Set her copies from the flirt's manual; make her the toast of your set. I wish her no greater harm."

"You do not like her, then?"

Miss Dashwood smiled unpleasantly.

"Do not like her because I want her to enjoy life as I have enjoyed it? Come, now, that was an astute observation. But really, if you are going to analyze my motives instead of obeying my commands, I shall have to select another ally."

"Fenton Cooper, perhaps?" said Leonard Heywood, sneeringly. He got up from the sofa where he had been lounging by her side, audaciously toying with the fringed ends of her long sash, and walked over to the center table, where he began idly turning over the leaves of an album. Ida's voice came to him mockingly:

"Fenton Cooper? What in the world has he to do with these innocents abroad?"

He did not turn towards her. His gaze was fixed immovably on the photo before him, though he could not have said whether it was a man's or a woman's face he was looking at. His voice was thick with passion.

"That is a question I might better ask you. How many more times, Ida Dashwood, do you suppose I will submit to be made a tool of? When you told me that day at Mrs. Featherston's that you had some country friends coming here, to whom you wanted me to be polite, I smiled at your selection of a friend for these innocents, but I believed you, and I proposed to do your bidding because—"

"Because," said Ida Dashwood, with cruel deliberation, "you dared not refuse. It is not worth while for us to talk hypocritically when we are alone, Leonard."

"Because," he said, almost defiantly, "in spite of everything, I love you. I ought to hate you. You have been my ruin. Oh, don't start and look at me so reproachfully. Yes, you have been my ruin. I have stained my soul for you. I have."

"Spare me the enumeration of your sacrifices." She put her white and jeweled hands over her ears, and looked at him imploringly. He waited gloomily until she dropped her hands.

"Why did you not tell me that you hated this girl because Fenton Cooper loves her?"

"Fenton Cooper? Fenton Cooper? You anger me with your senseless jealousy, Leonard Heywood. Will it make you happier to know that he has left for Europe, to be gone two or three years?"

"Has gone?"

"Has gone. His own sister told me so."

"He engaged himself to-day as Miss Upham's tutor."

It is false; false, I say, and you only say it to torture me."

"Torture you? That is a candid admission."

He came over from the table and stood looking down upon her with bright, feverish eyes. He had been loving this woman madly for years. For her sake he had staked his soul and sullied his name. Both knew that things never would, never could, be different between them from what they were at that moment. He marveled at her power to stir him to such a pitch of jealous wrath. But then she was so very beautiful, and never more beautiful than at this moment. She put out beseeching hands to him.

"A truce, Leonard, to sharp words. Be kind to me."

He turned from her with a low, insolent laugh, and walked slowly toward the stand of tropical plants which adorned the bay window. He pulled an olive branch, and coming back to her sofa bent and laid it on her lap and pressed his hot lips quickly to her soft, white hand. She glanced nervously toward the window he had just left. It opened upon a balcony. She was sure she had seen a dark form flit between the evergreens and the electric light which illumined the public park outside.

"Please close the inner blinds, Mr. Heywood. I shall certainly have to dismiss Maurice for his negligence."

Leonard Heywood rose from his stooping posture and went to do her bidding. For a moment he stood as if paralyzed, with his hands upraised. Then he turned towards the woman on the sofa, with a ghastly face:

"Have you laid a trap for me, traitress?"

"Have I—"

There was a sharp ring of the front bell. Leonard Heywood started nervously. Miss Dashwood came towards him in unfeigned surprise.

"What is it, Leonard? Why do you look so white—so scared? I have given orders that I am at home to no one, but—"

The ring was repeated. He broke from her outstretched hands with a nervous laugh.

"Maurice has taken advantage of that to absent himself. Let me answer the door for you; you should not remain in the house this way alone."

He was gone before she could enter a protest. She could hear him open the front door, then—was it fancy, only?—she imagined she could hear a slight sound of voices outside the closed door; a shuffling of feet, followed by absolute silence.

She waited for him to come back to her, but he did not come. She was no coward, and

would not summon the servants. She would investigate this mystery herself. She passed through the suite of parlors into the hall. Mr. Heywood's hat was gone from the rack. Perhaps he had taken it upon himself to dismiss some unwelcome visitor of hers. His insolence was beyond computation when he was angered. She opened the front door without in the least knowing why she did so.

There was a street lamp immediately in front of the house. By its light she could see something lying in the vestibule. She stooped and picked it up. It was a small, worn satchel, such as women who care more for the convenient things of life than for its elegancies carry whenever they leave the house. She took it back into the parlor and examined it. It hardly repaid her efforts. There was a crumpled handkerchief in it, a bunch of keys and a curious, empty sheath.

CHAPTER VI.

UNA HAS A VISITOR.



impatient to get on as if her life depended on her learning everything there was to learn in the next few months."

It was raining pitilessly at the moment. Mrs. Upham, comfortably toasting her slippers at the dining-room fire, addressed these remarks to as much of Mr. Upham as was visible from behind the morning's paper. From where she sat she had just seen the tutor, bent and spectacled, depositing his mackintosh and umbrella on the rack in the hall.

Yes, Una did sometimes try the patient Capers sorely. She was doing it that morning. He had found her languid and discouraged. She looked pale, and she acted rebelliously, but he never permitted himself to forget that first delightful morning when he entered upon his duties as Una Upham's tutor. She had put her two soft, little hands in his, and with an infinite sweetness of voice and manner, had made what she called her confession:

"I don't love learning for learning's sake. I love it for—somebody's sake. O my master, take me and mold me into a woman he may be proud of. As it is now, I blush for everything about myself. You will teach me what to do and what to leave undone, for his dear sake. You don't know yet how hard a task yours is going to be, but I have promised. He said I should not see him for two whole years. But if, when he comes—"

She stopped in blushing confusion. "What then, sweet child?" the tutor had asked, in his slow, timid voice.

"If, when he comes, he should say to me, 'You have failed!'"

"But we will not fail. For his sake, for Una's sake, we must not fail."

She had flashed a radiant smile at him from her deep blue eyes, then dropping the curling lashes until they rested on her smooth cheeks, she had said it ever softly:

"No; for his sake, we must not fail."

"For Una's sake," the master had repeated, and from that moment up to the one which saw him open the school-room door, on that rainy morning, their intercourse was prosaic enough. The tutor was calm, exacting, judicial. Una, most of the time, was bright, ambitious and eager. He found her standing by the easel, with her palette and brush in her hand. She turned a pale, discouraged face towards him, pointing scornfully towards the picture on the easel, which she had been scanning dispassionately:

"Will I ever accomplish anything worth the doing? Dear me, my head does ache so this morning, and that is such a daub!"

"Perhaps your head aches from too close confinement to the house. It is well to apply one's self systematically, Miss Upham; but your health is of the first importance, now."

"Oh, don't praise me!" Una put out deprecating hands. "It is that horrid hall. Mamma would insist; said she had not brought me here to make a book-worm of me, and I don't think it would have hurt me if I hadn't let Mr. Heywood persuade me into taking a second glass of champagne. He said no society lady would consider herself fairly launched if she was afraid to take her two glasses. And you know I want to be a society lady."

The tutor was busy with the books and papers on the study-table. He was unaccountably clumsy that morning, his clumsiness culminating just then in the overturning of the inkstand. He pulled out his handkerchief and recklessly mopped up the ink with it. Una watched him wonderingly. She had never seen him act so nervously or look so extremely pale. He was positively ghastly. She seated herself opposite him at the table and waited with childlike timidity for the rebuke she felt was imminent. When it came, it was delivered in a low, passionless voice, but with exceeding earnestness:

"I think balls and late hours are at all times destructive of studious habits and of health, but I believe, Miss Upham, if your father were not such an entire stranger here, Mr. Leonard Heywood would never have dared introduce you into his circle of society."

"Dared? Why, mamma adores Mr. Heywood! Says he is the only man she has seen yet that she would be willing for me to marry. But then, what is the use of quarreling? My head aches. He would make me take a second glass of champagne. He says no society lady would be afraid to do it, and oh!—she punched an ugly hole through the table-cover with the paper-cutter—"Mr. Capers, he says I am going to be the toast of the season. Do you think somebody, you know who, will be proud to hear it?"

"No; ten thousand times no! He would rather hear you were dead than become the toast of Leonard Heywood and his associates."

Una clasped her hands to her head. "Mercy! Don't be so vigorous. I told you my head ached." She flung the book in her hand to the other side of the table. "There is no use trying; lessons are a failure this morning. You will have to excuse me, Mr. Capers."

"I have not offended you by my violence, I hope," he said, speaking more slowly than usual to hide the tremor in his voice.

But before Una could answer, Mrs. Upham's radiant face was framed in the open doorway as she beamed upon them over an immense bouquet of costly, hot-house flowers.

"For the toast of the evening, with Leonard

Heywood's compliments." She was holding a card between the thumb and forefinger of her left hand. "Don't scold, Mr. Capers, but it was so prettily done, and the flowers so lovely, I could not wait until after-school hours to show them to Una. There, now, they shall stand right here on the study-table, so you can get the benefit of them, too."

She brought a vase and placed the flowers on the table between Una and her tutor. "Mr. Heywood is such a polished gentleman!" She stood back to admire Leonard's votive offering.

"Mr. Heywood," said the shabby tutor, in a low, intense voice, "is a disreputable man about town, who is taking advantage of Mr. Upham's being an entire stranger here to force himself upon you and your daughter."

Mrs. Upham drew herself up with frigid displeasure. "Mr. Capers, you are here to superintend Miss Upham's education, and not to advise her parents as to whom they shall or shall not accept as associates. You have filled your place as teacher so entirely to our satisfaction, heretofore, that for Una's sake I will overlook this first piece of officious impertinence. I hope you will not repeat it, sir."

"I will not repeat it, madame," he answered, with slow dignity. He seated himself, and buried his hands and eyes with Una's French exercise book. Una fell to panting furiously, and Mrs. Upham retired with dignity, comfortably assured that she had forever rebuked any latent tendency towards impertinence which might exist in the "brown grub's" breast.

"You are right," said the tutor, closing the exercise book and sighing heavily, "lessons are a failure to-day. I think you would be doing better to be resting, after last night's dissipation."

Una was sitting with her back to him. She did not turn around, but he could see her hastily dash a tear from her eye. The child was nervous and unstrung. He went over and stood with his hand resting upon the back of her chair.

"My pupil," he said, gently, "in the many months we have worked together so harmoniously, I have never asked a personal favor at your hands. I am about to ask one now."

"Well, what is it? I owe you some reparation for mamma's unkindness."

"No; you owe me nothing. You have been a sweet, docile, good pupil. But you owe it to yourself to grant the favor I am going to ask. Promise me that you will accept no more invitations tendered you by Leonard Heywood."

Una shrugged her shoulders impatiently.

"Oh, I am tired of the very sound of his name. What good would my promise do,



HAVE YOU COME TO SEE PAPA ABOUT THE ADVERTISEMENT?

when mamma does just exactly what she pleases with papa, and me, too."

"True, very true," said the tutor, turning away sadly and leaving the room without another word.

Una was sitting just where he had left her, listlessly touching her picture here and there with sepi, when Bah opened the study-door and said, in that shrill, sharp voice of hers which always commanded immediate attention:

"Miss Uppen, here's a person as said she wanted to see you all to yourself, miss, so I brought her straight 'long up here, as I seen the schoolmaster leave some time ago."

The woman whom Bah thus unceremoniously introduced into Una's presence sank upon the chair the tutor had vacated, and dropped her head upon the arms she had folded upon the study-table. Una hurried towards her, ordering Bah to fetch a cup of tea immediately.

"I want no tea," said the woman, motioning Bab impatiently out of the room. "I want to talk to you—to you alone. I have come to ask a great boon at your hands."

She got up, and walking towards the door Bah had just made her exit by, she turned the key in the lock and then came back by the wondering girl by the table. She threw back her veil, and Una could see that, in spite of her pallor and a certain worn look about the large eyes, her visitor was a strikingly handsome woman. Her own eyes fell beneath the steady gaze fastened upon her by this strange woman, and she could feel the hot blood dyeling her temples. The woman's first words did not lessen her confusion.

"You are very beautiful, child, I do not blame him."

"Do not blame him? Do not blame who, for what?"

But her visitor was not disposed to answer her direct questions.

"And you are younger and brighter than I—much younger. I do not blame him."

"My good woman, you are positively incomprehensible."

"Yes," said the woman, with rising passion in her voice, "and richer. Oh, no, who could blame him?"

Una, catching at the word riches, and hastily concluding her visitor must be one of those troubled-crazed creatures with which the big city swarmed, promptly produced her purse. The sight of it inflamed the woman's wrath to a frenzy.

"Put up your gold," she said, vehemently; "you have robbed me of that which your gold cannot replace. If I were in need, these hands could toil; they are not quite as small and pink as yours," extending them viciously, "but they have the strength of the eagle's talons. Yes, I say you have robbed me, and I hate you."

"I have robbed you?" Una recoiled in alarm. "Of what?"

"Of a lover! Child, baby that you are, you have robbed me of the only heart I ever cared to win. Oh, if need be, I could have toiled for him like a slave, I loved him so."

Una put out her hand soothingly. "My poor

woman, you certainly must be taking me for some one else. I have no lover. You say you would have toiled for him. Your lover was poor, then."

"Only a drummer—a poor, commercial traveler."

Una started. "A drummer? It cannot be."

"Ah, you start and blush. Then you lied. You have a lover. What have you done with Fenton Cooper, girl?"

"Fenton—Cooper?"

"Yes, Fenton Cooper—the man who, but for you, would have been true to the love he offered me; who, but for you and the gold you offered with, would have been my husband; the man who has scorned the woman who adores him to win a fairer, younger, richer bride."

Una stood before her pitifully white and still for a full moment, then she raised her pretty head proudly.

"A richer bride you say? Has Fenton Cooper done this thing?"

"He has."

"And you would have him back?" Her young voice was laden with scorn.

"Do not carry yourself with such fine scorn, Miss Upham. The world is all before you—youth, wealth, adores. It is well-igh all behind me. The poor make few new friends. He was my all."

"And he was yours?"

"Yes."

It came slowly, and after a long pause.

Una flung out her hands with a gesture of repulsion. "Then take him back; with all my heart I say it. Fenton Cooper, your false perjured, designing lover, is not the Fenton Cooper of my childish adoration. I did love him." She stopped and put her hand to her side, as a spasm of physical pain seized her. "By the sharp torment of this reunciation I know, for the first time, how dear he was—was, do you understand me?"

"He will come back to you."

"If he does, I would spurn him from me as I would a toad. Now, go. I have given you all you asked for."

"Not all."

Her visitor rose and slowly drew the hood of her shabby, water-proof cloak over her head. She was scanning Una's pale face mercilessly.

"What more?"

"You promise that he shall never know you have learned the truth from my lips. I dread his wrath, and it would render null and void the sacrifice you have made for me."

"You need not be afraid. I have no reproaches to waste upon him. I have made no sacrifice. He shall go back to you unharmed by anything but the whips of his own guilty conscience. I do not know the man. Now, go."

She pointed imperiously to the door, and her visitor passed through it slowly. She had accomplished what she had come for, but her hearing was scarcely that of a conqueror. As she closed the study-door she heard a heavy fall; opening it quickly again she found Una Upham lying prone before her easel. Once more the woman went out, more quickly this time.

"Nothing but a swoon! How hard these girls take their first lessons in life!"

She did not go out by the front door. She penetrated to the basement floor, where she found Bab laboriously making an entry in a small blank book, with a very blunt lead pencil.

"Your young lady is lying upstairs in a swoon; you had better hurry up to her."

Bab dropped book and pencil and darted upstairs without a question. Ida Dashwood lingered only long enough to master the ill-spelled scrawl in the book the girl had forgotten to take with her.

"Him and her must a had some sort of row to-day. He left early this morning, but she got your flowers all right. No body don't suspect nothing. I hope this will reach—"

"So, then, this is Leonard Heywood's detective bureau," said Ida, replacing the book on the table where Bab had been sitting, and quietly leaving the house by the basement door. "I wondered where he got his information. Bah! She bared her face to the pouring rain; it refreshed her. 'I have stooped, indeed, but I have broken her faith in him; that is one great step gained. It will not make me happier, but I will know the hot, fierce joy of a Sanson pulling down the gates on his own head and on his persecutors.'"

Three weeks had passed since Leonard Heywood had left her house so suddenly. She had summoned him more than once. Was he, too, falling a prey to that girl's violet eyes and infantile innocence?

An hour later, richly attired and faultlessly coiffured, Una's strange visitor sat sipping her tea at Marie Featherston's lunch-table.

"When did you hear from your brother?" she asked, carelessly, but she watched her hostess' face for the faintest indication of embarrassment.

Mrs. Featherston took a letter from her pocket and referred to the postal mark.

"I never can remember dates. My last letter from him was dated Paris, December 15th."

Ida could plainly see the foreign stamp. He threw her into a state of absolute mental confusion.

(To be continued.)

IT IS WORTH READING.

We understand a busy man's views in regard to prolixity. In these days affairs proceed at a railroad rate and there is no time for unnecessary halt, so we fall in with this idea momentum, and briefly call attention to the essential points of a vital matter, or rather, we let others do it for us. Here are extracts from two letters which need no further comment.

REISTERTOWN, Md., Feb. 15, 1888.

"I would like to see you and tell you what Compound Oxygen has done for me. It was slow, but sure. Now, almost after two years, after using only one treatment, I think I can say truthfully my health is as perfect as it can be on earth. Two doctors of Baltimore examined me and said mine was a hopeless case of asthma, and I will not tell you how much I have suffered with my lungs."

MRS. MARY R. IRELAND.

A concluding extract from another letter will furnish most satisfactory reading.

MYERSVILLE, Md., Aug. 6, 1888.

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Our Household.

THE MODEL HOUSEWIFE.

She kept her house with neatest care,
No fleck of dirt was hidden there.
Each day she walked the self-same route,
And kept its corners well swept out.
Her carpets, all, were in the shade,
For fear their colors bright would fade.
Dirt, she thought, was a mortal crime,
And so she fought it all the time.
On flies she daily made a raid,
Till none her household dared invade.
What mice with her tried to contend
Soon came to an untimely end.

Her eyes contracted in a squint,
She looked so much for dust and lint.
Her husband's life was full of woes,
For she almost brushed him out of his clothes.

When at rest in his easy chair,
Lo, and behold! his wife was there,
Armed with the dust-brush and the pan,
To sweep up around "that careless man."
No daughters fair or sturdy boys
Disturbed her home with mirthful noise.
She scarce found time to dine or snip
How could she stop to bring them up?

Thus was she through the walks of life
Wedded to dirt, and a faithful wife.
When, at last, death's angel came
Into her home and called her name,
He found her in the north-west room,
Still wielding her beloved broom!
He told her that her time was nigh;
That she must now prepare to die.
She gravely answered with a frown:
"Just let me sweep that cobweb down."
Her apron-strings she then untied,
And calmly laid her down and died;
But whispered with the last breath given,
"I—hope—there—is—no—dirt—in—heaven."
—H. Maude Merrill.

HOME TOPICS.

CHOCOLATE.—A friend who is famous for her delicious chocolate, says she never grates chocolate. Two or three hours before she wishes to make it she puts the chocolate in a bowl with half a cup of boiling water, and sets it on the back of the range to melt. Use equal quantities of milk and water, and two squares of chocolate to a quart. When the chocolate is melted, stir it to a smooth paste; have the milk and water boiling, and add the paste gradually. Let it boil about five minutes, stirring it all the time; add a tablespoonful of sugar and ten drops of vanilla. Serve as soon as possible with a spoonful of whipped cream on the top of each cup. Do not let chocolate stand uncovered for a single minute after it is done.

RENOVATING CLOTHES.—I have no doubt it would be delightful to be able to give away to some needy one all half-worn garments, and buy new when needed, but I cannot speak from experience. I do know, however, that when resources are limited, it is a comfort and satisfaction to be able to renovate and remodel until the old is made to look "almost as well" as the new.

Borax water is excellent for sponging either silk or wool goods that are not soiled enough to need washing. Cashmere or any wool goods may be washed with a little borax in the water, and the color not be injured. They should not be rubbed on the board, but only between the hands, and hung on the line to dry without wringing. If treated in this way, and pressed on the wrong side as soon as dry enough, they will look like new.

Black goods which have become rusty can be made to look fresh again by washing

between the hands and hang the clothes up to dry without wringing. As soon as dry enough, press on the wrong side with a moderately hot iron.

If you clean silk, never iron it while wet or very damp. A better way than ironing on the wrong side is to have the silk dry and then lay a thin, damp cloth over it and iron on that. Often a dress which has been worn one season may be renovated by sponging and pressing carefully and adding a vest, collar and cuffs of some new material. When a dress is past wearing, there will always be enough that is good to make a school dress for the little girl, and with the addition of a little bright plaid, or braid, not only a serviceable, but quite pretty little dress can be made.

The light, soft, wool goods worn by gentlemen in the summer make pretty skirts for little girls, as well as snits for the little boys. When dress waists are past wearing, they should be ripped to pieces and the linings washed and saved to line little dresses with. If the old linings are not worn too much, and the seams are sewed before they are washed,



FRONT.



BACK.

they are very convenient to wear under jerseys, etc.

CARE OF SCHOOL CHILDREN.—We all know, if we stop to think about it, that health is of primary importance, and the pursuit of knowledge should not be allowed to interfere with the care of the body. Frequently a child is so ambitious to keep up with his class, or to have a record for punctuality, that he will plead to go to school when not well. The parent should judge and decide wisely in such cases. Headache or a feeling of lassitude and weariness in a child always shows that rest is needed, and often a day or two out of school, when these symptoms are present, will prevent weeks of illness.

It is important that school children should have a plain, nutritious breakfast, and time enough to eat it without hurrying. In too many families, especially during the short days of winter, breakfast is so late that the children hurry down a few mouthfuls, with one eye on the clock, and then, perhaps, run all the way to school to avoid being tardy. I heard a teacher, who has a class of forty girls, say that she had talked with them on this subject and found that at least one third of them often came to school without eating any breakfast, and as many more took only coffee with a hot roll. These were girls of from thirteen to fifteen years of age—the age when they need the best food, and most stimulant. Was it any wonder they had headaches, and were pale and nervous?

Young people, at least, are better off without either tea or coffee, but if they drink anything at meals, give them hot

water, with milk and sugar if they like. See that the girls get plenty of exercise in the fresh air. Boys usually look out for this themselves, but sometimes mothers are so anxious that their daughters should have the so-called accomplishments that they keep them on the piano stool when they ought to be romping out of doors. Don't let them study too late at night, or go to bed tired and worried over their lessons, or they will not get the good, sound sleep which they need. It will be far better for their after life if they take a few more years to get through school, and grow strong and hearty meanwhile, than to crowd and hurry through at the expense of physical development.

MAIDA McL.

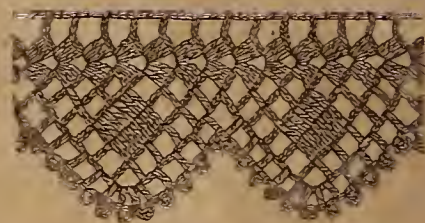
GLOVE SACHET.

Make a foundation of stiff buckram, twelve inches long by seven wide, for each side. Line the inside with quilted satin, and cover the outside with plush. Finish the edges with cord, and the corners with bows. Decorate all around the middle with a band of embroidery worked on cream or white Java wool canvas. Using olive plush and old gold lining, cream band worked in two shades of olive filling silk, makes a pretty combination.

INDOOR TOILETTE WITH BLOUSE BODICE.

For this a well-fitting dress lining must answer as a foundation. A deeply plaited yoke back and front of China silk, either white or cream color. The lining should button down in the front with plain, flat buttons, concealed, then the outside back and front of material laid in folds and

If mother does not like plants, how would a work-basket snit, made out of a small-sized cheese-box, mounted on three broom handles? Bore three holes in the bottom of a cheese-box, equal distances apart, slip in the upper ends of the legs, fasten securely with screws or nails. Where the legs cross, wind a wire around several times to make them solid; this can be concealed by a ribbon band and bow after the basket is finished. Sandpaper the wood until smooth, and varnish; sandpaper again, and then give



CROCHET EDGING.

two coats of varnish in succession. The inside of the box may be finished in this way, or lined with cretonne or satine, and ornamented to suit the taste.

What lots of presents there are for the girls to make! Handkerchiefs and hat-marks to embroider, crocheted trimming for aprons, crocheted mats for the table, scarfs to ornament in endless ways for the center-table, or pictures, lambrequins to paint or embroider, sofa-cushion, either of silk done in crazy-work, or light brown linen stamped for outline work and done in red cotton; these are real pretty for every-day use, as they wash so nicely.

Then there are the pincushions. Did you ever see one made of two pieces of cardboard shaped like a horse-shoe, covered with plush or silk, and then sewed together as we used to the old-fashioned round pin-wheels? Sew ribbon to each side, and tie in long loops at the top. Place the pins around the edge, with the heads projecting a little. What a cunning pincushion to hang on some one's dressing-case!

Cover an old palm-leaf fan smoothly with cretonne (or plush, if you can afford it), fasten two long pockets to the center, and you have a nice slipper-case. Ornament the top of the pockets with plaited ribbon, and tie a bow of ribbon at the bottom, where they are gathered in a little to correspond to the shape of the fan.

Who does cross-stitching on the plain, plaid gingham? Use No. 12 white darning cotton. Double cross-stitching is prettier than single. It is done by using nine small checks for a bar instead of the one. One gets along faster in a pattern, and the effect is much prettier.

Last, but not least, who does not have some little friends to dress dolls for? Have you a china head with the shoulders broken off? Cut out a pattern of a body to correspond in size to the head, with the head on, as for a rag doll. Sew up the seams around, leaving the body open at the hips. Now put the rag head inside the china one, and fill in the stuffing of some kind—bran, sawdust or old ravelings from the rag-bag are splendid. Stuff the head as full as possible, being careful not to punch hard enough to break the china. Now sew across the neck, or wind with cord so that the filling does not work down out of the head, and it is just as firmly



BAND OF EMBROIDERY FOR GLOVE SACHET.

fastened to the body as if the shoulders were still there. Stuff the body plump, fasten up the lower end, sew on the legs and arms, and you have a good doll for the baby. Experience has taught me that a china head stuffed hard with some material will not break as easily as one left empty and sewed onto the shoulders.

Well, girls, if you get through with this list, just call for something else, and I will try and be ready for you.

TOPSY.



GLOVE SACHET.

in the following solution: Take one ounce extract of logwood, one tablespoonful of salsoda, one tablespoonful of soft soap and put together in a pailful (about twelve quarts) of boiling hot water. If the cloth is much soiled, use more soap. Stir the mixture well, and skim it; then put in the goods while the mixture is hot, and leave it about half an hour, stirring and lifting it up and down until it is cool enough to bear the hands in; then rub

MORNING TOILETTE WITH JACKET FRONTS.

This toilette, made of fine, Saxony flannel, is of a princess shape. The fronts are composed of two breadths each 19½ inches wide, gathered at the neck and waist, and fastened the whole length with buttons. Plain side breadths are set onto these, and the backs, cut the length of a basque bodice, are completed by straight, full breadths. The jacket fronts are to be turned back, as seen, and faced with black moire, the upright, as also turndown collar, wristbands, and half belt four inches wide, being of the same material.

CROSS-STITCH AND CROCHETED EDGE.

The patterns we give in this issue are to be used on even-checked gingham or white, cross-barred muslin worked in red. This treatment of color is very pretty for dressy aprons for afternoon wear. The edge should be hemmed about three inches deep, finished with a pretty edging.

CROCHETED EDGE.—Make a chain of 16, turn and put the needle in the tenth stitch, make 3 double crochet, chain 1, 3 double crochet in the same stitch, chain 3, put needle in last stitch of chain.

Second row—Chain 6, make a double shell in center of the one on first row, chain two, one single crochet in last stitch of shell, chain 3, make double crochet stitch in third stitch of chain in row above.

Third row—Chain 3, make double crochet in three places to form three eyelets, as seen in pattern, shell in the center of shell in former row, 3 chain and fasten.

Fourth row—Chain 6, double shell, seven double crochet stitches on the holes above it, chain 3, fasten.

Fifth row—Chain 3, seven double crochet on the ones above, chain 3 twice and fasten, double shell, chain 3, fasten.

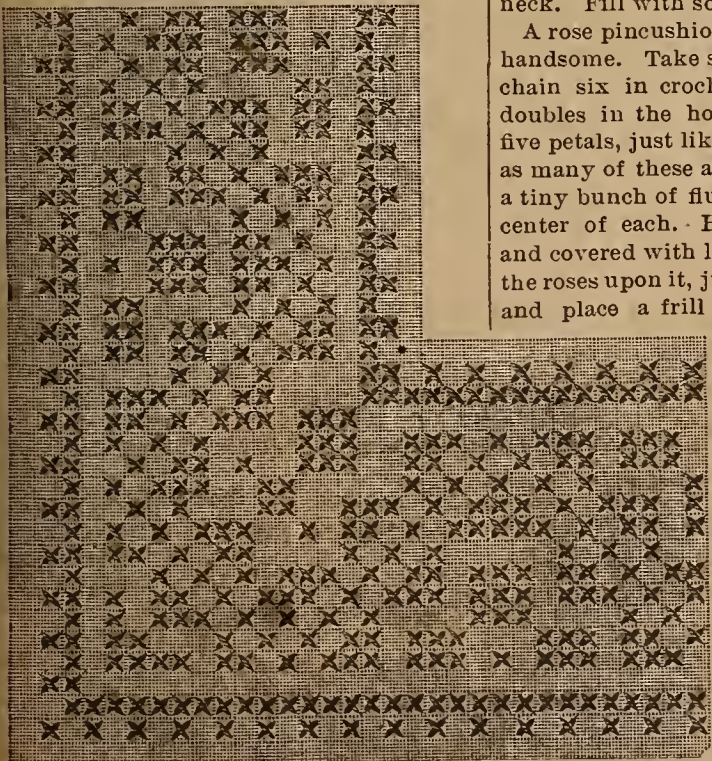
Sixth row—Chain 6, double shell, make six holes down the work, with two in the chain between; this forms the points, the edge being done separately, with a picot stitch on every long crochet stitch, which is 3 chain then fastened back in the first stitch by just pulling it through.

BETTINA HOLLIS.

CHRISTMAS OFFERINGS.

Every year the near advent of Christmas brings up the oft-repeated question of gifts. In most cases, those articles made by loving fingers are valued more than the offerings from shop and counter. The following hints may prove acceptable to those who have many to provide for. If this work is not already begun, as it should have been, do not let a day pass without doing something for Christmas.

Drawn work offers an endless line of articles beautiful for gifts. An apron of



BORDER AND CORNER; CROSS-STITCH.

butcher's linen, with three rows of drawn work; a tidy one yard long, with two rows of drawn work on each end, and a deep fringe, the center tied into a single knot; a tray-cloth, a set of napkins and a lunch-cloth; a fine, mull tie, ornamented with very fine work; a handkerchief, a dressing sacque of fine canvas. These are all good presents, to say nothing of lavender bags of gray canvas, worked with

crimson wool, or a table-scarf of crimson hunting, with old gold silk. For linen is not the only material which can be used in drawn work.

Pillow-shams are no longer used, but a long, narrow scarf to throw over the pillows is used instead. Use coarse lace, and cut to suit; work any pretty darned net pattern across it, and finish the edge with a scant flounce of edging. Line this with buff, pink or blue.

Something equally as useful is a writer's find-all, and it may cost all the giver may choose to make it. Take a cigar-box and place it in the oven to remove the smell; cover it with satin, or varnish it and paint a spray of autumn leaves upon it. Glue bands of ribbon across the inside to make compartments. In one, place six lead pencils; in another, a box of pens, then twenty-five postage stamps, a package of postal cards, a rubber, a bottle of black ink, and a paper-knife finishes the box.

A box for papers and magazines is a very fine thing for a sitting-room, and may be just what some tired mother has wished for to hold these left-overs. Take a soap-box and put on a lid with small hinges; get some pretty, flowered sateen and tack around the box smoothly. Pad the lid with old carpet or soft cloth, and then cover. Place a strong bow of ribbon at the front to raise the lid with.

A letter-case is another household necessity. Cut a large circle by a dinner-plate, and a half moon to fit at the bottom, of pasteboard; sew over and over firmly. Now this may be covered with velvet, satin or plush, painted or embroidered, or gilt or silver paper may be used with scrap pictures. It makes a very satisfactory letter-case however it is covered. A photograph-case is made by covering a circle of pasteboard, of the same size, with black velvet. Place two-inch folds across from side to side to slip the picture under, and place a large bow of ribbon at the top.

A crocheted case is very nice, also, made of macrame cord loosely crocheted to fit a square, tin box large enough to hold a cabinet. Dip it in clear starch and dry it over the box. When dry, varnish, and run ribbon through the opens paces. Little toothpick holders for the dressing-case are made in the same way, only over little, round boxes. A cover for a flower-pot is made the same, finished with ribbon, and when a nice flowering plant is placed therein, where could you find a better present for a friend?

Painted perfume-bottles are nice small gifts. Any flat or square bottle may be used. Paint some with snow scenes, and sprinkle diamond dust upon them. Gild the top, and tie pretty ribbon around the neck. Fill with some nice perfumery.

A rose pincushion is something new and handsome. Take soft, pink Saxony yarn, chain six in crochet, join and put ten doubles in the hole. Around this make five petals, just like a wild rose, and make as many of these as you may desire. Tie a tiny bunch of fluffy, yellow silk in the center of each. Have a cushion stuffed and covered with light green satin. Baste the roses upon it, just touching each other, and place a frill of creamy, silk lace around the edge. The roses may be crocheted from white or yellow silk, and are very handsome.

The above hints will give a fair start to the Christmas gifts we are all making.

MARION WASHBURN.

We have used the Sponge Catarrh Cure in the family, and it has proved beneficial. It is pleasant to use. We hope our afflicted

friends will give it a fair trial and we are sure they will be pleased with it.

CHRISTIE IRVING.

ANCIENT INDIAN MONEY OR WAMPUM.

Over 300 years old. Sample sent for 6c., or two for 10c., with a full description of its use and value in 1570 by the American Indians.

MRS. F. A. WARNER, East Saginaw, Mich.

Read about the Great Cash Prizes. Page 53.

THANKSGIVING DINNER.

It is not always convenient for the country housewife to procure the ingredients to prepare dinners such as the bills of fare given in numerous household papers for festive occasions. For the benefit of such, the following bill of fare is prepared, the materials of which will nearly all be found on the farm, costing but little.

BILL OF FARE FOR DINNER.

Chicken Soup,
Roast Turkey, Baked Shroat,
Chicken Salad,
Mixed Pickles, Sweet Pickles,
Cabbage Slaw, Celery,
Mashed Potatoes,
Turnips, Parsnips, Sweet Potatoes,
Economical Pudding,
Pumpkin Pie, Mince Pie,
Grandmother's Thanksgiving Cake,
Doughnuts, Cookies,
Ice cream,
Sweet Cider, Coffee.

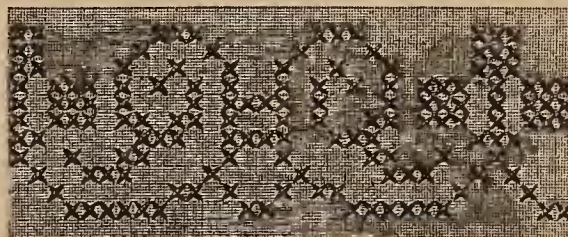
CHICKEN SOUP.—Prepare a large, fat chicken, put in the soup-kettle with two quarts of cold water, one onion and a sprig of parsley; let simmer gently for two hours, then add two chopped potatoes. When done, put in the beaten yolks of two eggs, a tablespoonful of butter, a grated nutmeg and a little salt and pepper; take up the chicken, and strain the soup.

ROAST TURKEY.—Plump your turkey by plunging in boiling water. Prepare a dressing of bread crumbs, butter, pepper and salt. Place the turkey on a rack in a dripping-pan, spread with bits of butter, turn and baste often. When nearly done, glaze with the white of an egg. Make gravy, and serve with wild plum jelly.

ROAST SHOAT.—Put a quarter of shoat on a dripping-pan without water, sprinkle with pepper and salt, baste with butter. Let cook two or three hours; when done, pour in half a teacup of walnut catsup. Serve with baked apples.

CHICKEN SALAD.—Take the boiled chicken from which the soup was made, remove the skin and fat, cut the meat from the bones, chop fine and put in a bowl. Take the yolks of three hard-boiled eggs and mash, add the yolks of two raw eggs, one teaspoonful of salt and a little cayenne pepper; mix well and add a spoonful of vinegar, and beat, then a spoonful of olive oil; continue until a cupful of vinegar and three tablespoonfuls of oil have been used. Set on ice two hours; when ready to serve, mix one head of finely-chopped celery with the chicken, pour over the dressing; garnish with whites of hard-boiled eggs and celery leaves.

CABBAGE SLAW.—Shave a small head of



BORDER CROSS-STITCH.

cabbage fine; to one quart add the yolks of three well-beaten eggs, a tablespoonful of sugar, one of melted butter, half a teacup of cream, a teaspoonful of mustard, with a little pepper and salt. Put the dressing over the fire and stir until thick; pour over the cabbage and set to cool.

PARSNIPS.—Scrape and boil until tender, put in a pan, cover with butter, set in the oven and brown.

MASHED TURNIPS.—Pare and slice, cook in salt water; mash, and season with butter, cream, salt and pepper.

SWEET POTATOES.—Wash and boil tender, peel and slice. Cover the bottom of a baking-dish with a layer of slices, spread thickly with butter and sugar, then more potatoes, butter and sugar, filling the dish. Set in the oven until the top is brown.

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SPONGE CATARRH CURE.

Medicated inhalation universally conceded to be the only rational cure. Our Sponge Catarrh Cure the only continual Inhaler in the World. The sponges (Fig. 2.) are saturated with our Wonderful Inhalent Mixture and placed in the nostrils as shown in Fig. 1. It is not uncomfortable, hardly noticeable. Thousands of cures. It will cure you. Cures catarrh, catarrhal headache, coughs, bronchitis, asthma, etc. Try a bottle and be convinced. To the first 150 orders received before Dec. 15th we will send your choice of a fine, colored, panel picture, 10x14 inches, or a popular cook-book of 256 pages. Ask your druggist for it. If he does not have it in stock, we send a trial bottle by mail, postpaid, on receipt of only 50 cents. Order now before you forget it. Address WRIGHT BROS. & CO., Springfield, Ohio.

ECONOMICAL PUDDING.—Four cups of flour, one of suet, two of dried cherries, one of dried raspberries, half a cup each of finely-chopped dried apples and peaches, one and a half cups of molasses, and two well-beaten eggs. Mix all together, add two teaspoonfuls of baking-powder and mixed spices. Serve with hard sauce.

MINCE PIE.—Take two parts of chopped apples to one of lean beef, add currants, raisins, sugar and spices to taste; moisten



MORNING TOILETTE WITH JACKET FRONTS.

with cider. Let stand on the back of the stove until cooked; let cool, and bake in puff paste.

ICE CREAM.—Dissolve half a teacup of arrowroot in a pint of milk; beat the whites of six eggs and stir in, sweeten with granulated sugar; take half a gallon of milk, set on the fire and boil, pour over the arrowroot and eggs, flavor with vanilla, and freeze.

GRANDMOTHER'S THANKSGIVING CAKE.—Two cups of light dough, two cups of sugar, one cup of butter, one cup of cream,

two eggs, half a teaspoonful of soda, one teacup of raisins and currants, one teaspoonful each of cinnamon and mace, one grated nutmeg; mix in flour to make stiff, let rise, and bake. Ornament with fancy, icing.

DOUGHNUTS.—One cup of sugar, two eggs, one cup of light bread dough, half a cup of milk. Mix in flour to roll thin; cut in cakes or fancy shapes, and fry in boiling lard.

PUMPKIN PIE.—To one cup of brown sugar and one cup of molasses add the yolks of four eggs, one pint of stewed pumpkin, with a little ginger, cinnamon, cloves and a pint of milk. Mix well and pour in deep pans lined with rich pastry.

COOKIES.—Two cups of sugar, one of butter, one of cold water, two eggs, flour to make soft dough, one teaspoonful each of baking-powder and extract mace. Roll thin.

ELIZA R. PARKER.

RATIONALLY TREAT YOUR COLD from the start by using Dr. Jayne's Expectorant, and you may escape Lung troubles not so easily gotten rid of.

QUERY.

Will some of the ladies who have had experience tell me how to cure a bunion? YEMASSLE.

FREE By return mail. Full Description Moody's New Tailor System of Dress Cutting. MOODY & CO., Cincinnati, O.



FIG. 2.

Our Sunday Afternoon.

THE NOBLEST RULE OF LIFE.

HERE is no life, however low
Or humble in its birth,
That may not from its store bestow
Some brightness o'er the earth.

The tiniest star, though far away,
Doth send an offering down,
And helps by its tremulous, golden ray
The brow of night to crown.

The river hastening to the sea,
With all its gathered treasures,
Yields up its offerings, full and free;
Their worth it never measures.

Thus nature proves in many a way
The noblest rule of living.
Would ye receive? then day by day
Increase thy store by giving.

—Zion's Herald.

ONE STITCH AT A TIME.

WHAT is the secret by which you do your work so beautifully?" The questioner held in her hand an exquisite piece of crochet work, wrought by the lady to whom the question was addressed.

"There is no secret about it," replied the lady; "I only make every stitch as perfect as I can, and am careful to put it exactly in the right place. There isn't one wrong or careless stitch in all that work. If I make a mistake, I ravel it out and correct it."

One perfect stitch at a time. So the marvelous fabrics of lace at fabulous prices are made. So the intricate and exquisite embroideries are wrought. So the costly garments of men and women are put together. One perfect stitch at a time!

The noblest lives are lived—one moment at a time. No moments wasted; no moments carelessly spent; no moments viciously spent. Wrong stitches in crochet can be raveled out, and made right. But who can reverse the tide of time, and undo a wrong act and make it right?

Some unknown friend left a card on my desk, on which was printed this: "I shall pass through this world but once! Any good thing, therefore, that I can do, or any kindness that I can show to any human being, let me do it, now, in his name and for his sake! Let me not defer or neglect it, for I shall not pass this way again."

Is there a better secret than that for making the whole fabric of life perfect? "Any good thing that I can do," that covers all our duty to God and to ourselves. "Any kindness that I can show to any human being," that covers all our duty to our neighbor. Love to God and to our neighbor is the fulfilling of the law.

One stitch at a time! Sometimes we allow ourselves to become confused with the thought or feeling that we have a dozen things to do at once. But this is a mistake. We can do but one thing at a time, think one thing at a time, speak one word at a time, see one thing at a time. For every duty really required of us, we have time given in which to do it. We may pass rapidly from one task to another, we may construct machinery by which much of our work can be done simultaneously, and thus multiply our executive power; but to live two minutes at once, is something no mortal can do, any more than we can recall one act or one moment of the past.

"Let us then be up and doing,
Heart within and God o'erhead."
—Christian Advocate.

THE SPIRIT OF JOHN HOWARD.

John Howard, the father of "prison reform," is thus described by the eloquent Burke: "He has visited all Europe, not to survey the sumptuousness of palaces, or the stateliness of temples; not to make accurate measurements of the remains of ancient grandeur, nor to form a scale of curiosity of modern art; not to collect medals, or collate manuscripts; but to dive into the depths of dungeons; to plunge into the infection of hospitals; to survey the mansions of sorrow and pain; to take a gauge and dimensions of misery, depression and contempt; to remember the forgotten, to attend to the neglected, to visit the forsaken, to compare and collate the distresses of all men in all

countries. His plan is original, and it is as full of genius as it is of humanity. It is a voyage of discovery, a circumnavigation of charity." But at the foundation of all this self-sacrifice was a profound religious conviction of divine approval. Howard believed in saving men at any and every sacrifice. He was opposed, ridiculed, insulted, called a "hobbyist," a man of "one idea." He was all of this; but he revolutionized the prison life of Europe, and civilization proclaims him the grandest moral hero of his time.—*Guide to Holiness.*

A DRAWING PREACHER.

Certainly we need to draw congregations, but we need to look well by what means we do it. A brother who had taken charge of a prominent church in a fashionable city announced from Sabbath to Sabbath sensational themes to draw the crowd. He said, "I will first get these worldly people to church; I will show them that I am up with them in the study of all the phases of free thought; I will teach them to respect my information and my ability, and then I will hold a protracted meeting and carry the gospel to their consciences, convert them and bring them into the church." The first part of the programme was carried out successfully; the second failed. The protracted meeting was held, but no revival, and under the most earnest preaching the congregation dwindled. The preacher seemed only playing a part in his earnest efforts. He had compromised himself and his ministry in the method which he had used to draw the congregation.—*South-western Methodist*

HOME—WOMAN'S REALM.

Home is the habitat of woman. In the home, all that is characteristically feminine in woman unfolds and flourishes. Home without woman is a misnomer, for woman makes the home, and home is what she makes it. If she is illiterate, her home partakes of this quality; if she is immoral, her home cannot be the abode of virtue; if she is coarse, refinement does not dwell where she resides. If she is cultured, pure, refined, these qualities will characterize the home which she creates. The higher the degree of her culture, her purity, her refinement, the more will these qualities characterize the home of which she is the center. The self that a woman takes with her in her marriage is her real dowry. If her dowry can be reckoned in numerals only, no matter how many they may be, wrecked indeed will be her husband, impoverished her children. But if she possess industry, gentleness, self-abnegation, purity, intelligence, combined with capability, she is in herself a treasure of treasures.—*American Agriculturist.*

VARIETY IN DOMESTIC LIFE.

The evenings of great numbers of families are monotonous humdrum. They involve the assemblage of the same people, the same surroundings, the same paterfamilias yawning over his paper, and the same querulous mamma overlaid with family cares. Fresh people with fresh thoughts, fresh atmosphere, anything to stir up and agitate the pool of domestic stagnation, are sadly needed and sadly scarce. There needs to be also a constant succession of such fresh people to bring about these results. The world is full of men and women, and in a better regulated life it would be the business after the day's work was done, to entertain each other, and give each other fresh life. As it is now, hundreds if not thousands of our households are little better than cells for the incarceration of each family. Thousands are thus worn out prematurely from utter lack of domestic recreation. There might be written over the graves of hundreds of thousands, "Bored to death by the stagnation of domestic life."

I HAVE failed yet to find, in a pretty large experience of life, a single case in which a woman who has exercised public spirit, even to the extent of self-devotion, was not also an admirable and conscientious daughter, wife, mother or mistress of a household.—*Frances Cobbe Power.*

THE ANDRAL-BROCA DISCOVERY!

THE NEW METHOD OF HOME CURE FOR

CONSUMPTION

Catarrh, Bronchitis, Asthma and all Diseases of the Respiratory Organs.

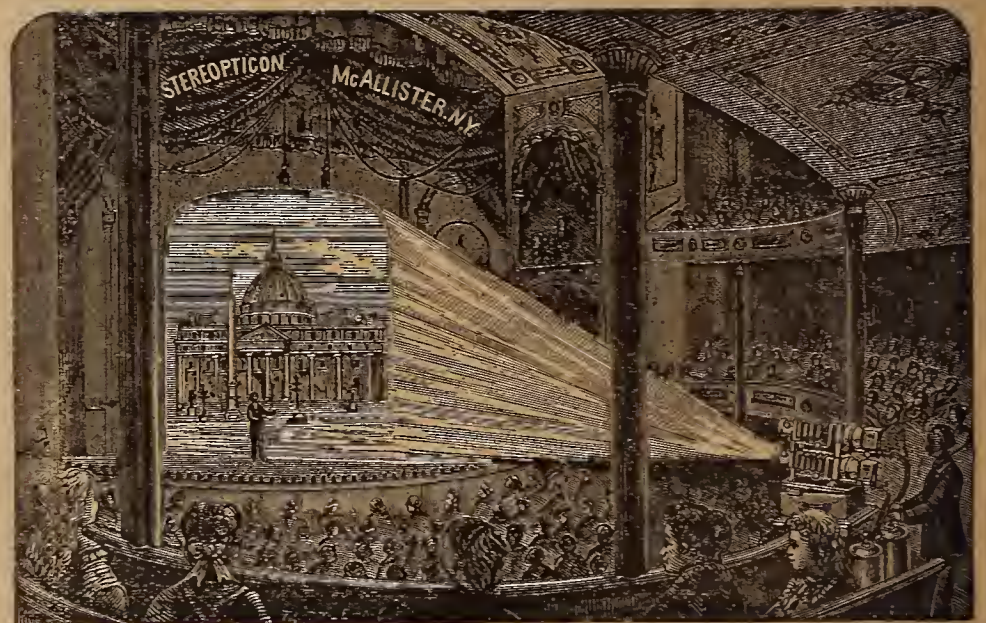
In Europe the wonderful cures of Consumption and kindred diseases by the New ANDRAL-BROCA DISCOVERY are exciting the medical world. Endorsed by the Public Hospitals, and by 4300 attested cures of Consumption in 90 days. Consumptive death-rate at once reduced from 85 per cent. to less than 15 per cent., and Catarrh, Bronchitis, and Asthma quickly and certainly cured.

Not a Drug—Not a Specific—but a New Scientific Common-Sense Method of Home Treatment—Plain, Simple and Practical.

The Greatest Discovery in Modern Medicine. A certain and absolute cure. In three months more than ten thousand persons have realized its blessings. To prove the certain success of this New Method of Treatment, it is determined to furnish a ten days' free trial of it to every sufferer. Remember, no charge whatever is made for this trial. You are simply asked to take it FREE, and try it for yourself. If, therefore, you suffer from Consumption, Catarrh, Bronchitis or Asthma, you should send at once for this ten days' FREE treatment. It may save your life. Give your name, address, express office, age, and full particulars of your disease, and you will receive FREE, the treatment suited to your case, with its full diagnosis, and a large illustrated 100-page book, THE NEW MEDICAL ADVANCE, which fully describes this great discovery. Please mention this paper. Address THE NEW MEDICAL ADVANCE, 62 East Fourth Street, CINCINNATI, OHIO.

Over a year ago our newspapers first noticed this wonderful discovery. The Christian Index, Dec. 22, says this mode of treatment is the result of the best thought of the medical profession of Europe, where its success is assured. The Medical Journal says it is the most important discovery in the history of medicine. The New York Voice, Dec. 8, The Christian Advocate and The Express state that the medical journals of Europe have been teeming with the wonderful cures the Andral-Broca Discovery is performing in the Hospitals of Berlin, Milan, Vienna and London.

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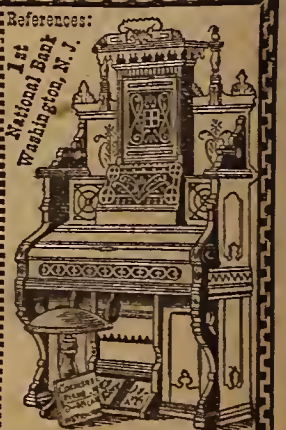
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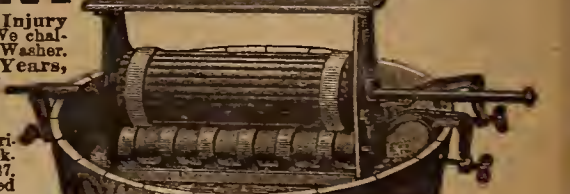
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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Horseradish.—J. W., New Westminster, B. C. See article on growing horseradish in July 1, 1889, issue of FARM AND FIRESIDE.

Butter Extractor.—J. G. H., Peoria, Ill. For full information about the butter extractor write to the United States Butter Extractor Co., Washington Building, No. 1, Broadway, New York.

Hay Cutter.—F. A., Clifton, —, wishes to know where the little hay cutter recently mentioned in the poultry department of this paper is made. The cutter is made by P. A. Webster, Cazenovia, N. Y.

Salt as a Fertilizer on Wheat.—O. N., Agency, Iowa. Good reports have been made of the use of salt as a fertilizer on wheat. Try it for yourself. Apply it broadcast in the spring at the rate of 200 or 300 pounds per acre.

Volga Watermelon Seed.—W. B. S., of Fort Benton, Montana, desires to know where seed of the Volga and Early Albany watermelons can be obtained. The Volga is catalogued by all leading seedsmen. Their catalogues will be ready in December or January; and our friend should send for some of them. I am unable to tell where seed of the Early Albany melon could be had. I would like to have a little of it myself.

Potato Rot and Grub.—W. L. W., of South West, Pa., writes: "My potatoes rotted badly this year, and what the rot left were badly eaten by the white grub. How can I rid my ground of disease and grub?"

REPLY BY JOSEPH:—The best thing you can do is to change the location of your potato field, and plant as far as possible away from where the potatoes were grown this year. Next season may be a dry one, and the rot would not hurt potatoes much. I do not know exactly what white grub might have done the damage, but if your field is infested with worms and grubs, repeated plowing, especially in late fall, will destroy many of them.

Bean Weevil.—J. B., of Marseilles, O., asks: "Is there any way to prevent the bean weevil from getting into beans? Describe it."

REPLY BY JOSEPH:—Yes, it can be prevented by planting seed free from weevils in a place where beans had not been grown near for some time. This is not always easily accomplished, however. You can kill the larvae in the beans by exposing them for an hour to a temperature of about 150 degrees, or by throwing them for a few moments in boiling water, and drying them afterwards, or by mixing a quantity of bupach with them and keeping in a tight sack or box. The bean weevil is very similar to the pea weevil, but much smaller, and usually much more numerous.

Large Bean—Potash.—M. R. C., of Harriou, Florida, writes: "I have a bean, the pod of which is 2 by 12 inches, the bean 1 1/4 inches. Are they fit to eat for man or beast?"

REPLY BY JOSEPH:—Muriate of potash costs us here \$8 per barrel of 300 pounds, while the same amount of cotton-seed hull ashes would cost \$5.50. Which is the cheaper source of potash? Is there any phosphoric acid in oyster shell lime?"

Scallion Onions.—E. A., of Prestigo (no state named), writes: "Some of my onions are very good, but about half of them are small and have a green top yet. I did not break them over in time. Could I let the green ones stand for early onions next spring? Or would it be better to pull them up and plant again in the spring? They average the size of a man's finger."

REPLY BY JOSEPH:—Probably you had a poor quality of seed, or the seed was sown too late or too thick. This wet, cool season has been somewhat against early ripening of onions, generally. The best thing you can do with your scallions is to throw them away or feed them to poultry. It is very questionable to my mind whether the practice of breaking down the tops of growing onions helps the crop very much, any way. I doubt that an onion which is bound to be a scallion, will make a large, solid bulb by such treatment.

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 35 King Avenue, Columbus, Ohio.

Paralysis of the Tail—Impetigo.—J. C., Wesco, Pa., writes: "My cow has lost the use of her tail.—There are some spots on her head and ears like dried scabs."

ANSWER:—Nothing can be done for the paralysis of the tail.—The spots on the head and ears will be cured if you apply either tincture of iodine, or an ointment of carbonate of lead and vaseline, 1 to 3.

Bad Eyes.—A. E. C., Dundee, Mo. It is not known that Norman horses have any special tendency to eye diseases, but if the "bad eyes" you complain of are suffering from periodical ophthalmia (so-called moon blindness) the whole thing finds an explanation, if your Norman horses belong to a family in which that disease, which is hereditary, is at home. Horses thus affected should, under no circumstances, be used for breeding. The distemper two years ago, very likely, has nothing to do with it.

An Injured Knee.—B. C. B., New Sharon, Me., writes: "I have a young mare that struck her knee, a short time ago, causing a swelling and a collection of bloody water, which I let out with a penknife in a day or two. Have bathed it frequently in hot vinegar and salt-petre, occasionally bandaging it at night. The swelling does not extend above the knee and does not go down below."

ANSWER:—Dress the wound with iodoform and absorbent cotton, and keep the leg bandaged all the time. Commence bandaging invariably at the foot, put the bandage on smooth and nice, keep it clean, and renew it, as well as the dressing, at least twice a day.

Sick Cow.—T. P. V., Woodward, Md. Yours seems to be a complicated case. It looks as if your cow had puerperal fever, or, as some call it, parturient apoplexy, and probably injured her shoulder when she broke down. The affection of the eye may possibly have been caused by a chaff lodging on the eyeball. If the cow is well enough to fatten, do, by all means, as you propose. As to how she should have been treated, I prefer not to express an opinion, because your description is not sufficiently definite to base upon it a sure diagnosis, and I do not like to enter any further into probabilities than I have already done in what I said above. Besides that, it is immaterial now.

Probably a Stone in the Bladder.—W. B., Huntington, N. Y., writes: "I have a horse that has some trouble with his water at times; the color is almost blood-red. There does not seem to be anything the matter with him except this periodical trouble. It comes about every three or four months."

ANSWER:—The difficulty complained of is probably due to the presence of a stone in the bladder, but to make a definite diagnosis, of course, requires an examination of the animal. Horses somewhat advanced in age, which have been extensively fed with bran, are not seldom troubled in that way. Very hard water may also be looked upon as a frequent cause. The treatment consists in a surgical operation, which, of course, must not be undertaken until the diagnosis has been secured by a local examination.

A Swelled Leg.—C. W. B., Easton, Conn., writes: "My colt has a swelling on his right hind leg, commencing about half way between the knee and fetlock, and increasing in size until it reaches the hoof. It is mostly on the outside. When he is on pasture it almost disappears, but after being in the stable over night it appears again, and has some heat in it. I bed him well, and have an earth bottom for the stable."

ANSWER:—Keep the leg scrupulously clean by vigorous application of a good brush, bring existing sores to healing either with iodoform or a liniment composed of liquor plumbi sub-acetati, one part, and sweet oil, three parts, and then give exercise during the day, and during the night apply a bandage made of woolen flannel, which is elastic and can be put on smoothly without forming wrinkles, but invariably commence bandaging at the hoof.

Diseased Molars.—E. J. F., Xenia, Ill., writes: "I have an old mare that does not chew her food well. She spits out cuds of unmasticated grass, and eats corn with difficulty. A veterinary surgeon here says her front teeth do not let the grinders come together, and should be shortened; and that he has an instrument for doing it that will not break or chip the teeth. I am doubtful if that treatment is likely to be satisfactory."

ANSWER:—Your veterinary surgeon is either ignorant or wants a job. The front teeth are all right, and should not be interfered with. The horse spits out the cuds, and does not masticate his food, because he has one or more diseased (carious) molars or grinders which must be extracted, and then his toothache will cease. You may yourself make the examination, if a strong and reliable man will assist you by holding open the horse's mouth, while you with one hand make the examination and with the other grasp the horse's tongue and draw it sideways between the molars on the opposite side. If, after you have examined the teeth with your fingers, you should yet be in doubt, you just need to smell at the finger that has touched the diseased tooth.

Worms in Lambs.—G. W. R., Hubbard, O. Your lambs, it seems, are killed by large numbers of small worms—Strongylus contortus—in the fourth stomach. These also may have lung worms—Strongylus filaria—in the bronchial tubes. Both kinds of worms very often occur in the same animal. If another lamb dies, you will, very likely, find the former in the fourth stomach, especially in its pyloric portions, if you eviscerate that stomach after you have passed a ligature around the duodenum, and around its connection with the third stomach, and then cut it open. Strongylus contortus is a small, brownish-colored worm, about as thick as medium-sized spool cotton, and about three fourths of an inch to one inch long. It is usually present in large numbers. If you wish to protect your flock next year, you must not allow your sheep any access to pools of stagnant water or to any ditches, etc., and must water them exclusively from a good, deep well. It will also be well to keep your flock next summer, if possible, on ground not occupied by your sheep this year. These precautions are necessary, because the larvae of these worms hatch and live in water and in wet places. The lambs yet affected, but still alive, you may treat each one of them to a dose of tartar emetic. The dose for a good-sized lamb, five months old, is about eight grains dissolved in an ounce of distilled or rain water. To older sheep you may give a little more, according to age and size, say from ten to fourteen grains. To make the medicine more effective it will be advisable to shut the animals up during the night without food, then to give the medicine in the morning, and this done, keep the animals shut up a few hours longer. It is also essential that the medicine be given slowly, and not be poured down at once—that is, at one swallow, because it is intended for the fourth stomach, and not for the paunch, and it will go into the latter if it is poured down rapidly.

An Inflamed Hock Joint—A Scurfy Cow—A Groaning Heifer.—J. M., East Palestine, Ohio, writes: "Two weeks ago my yearling colt's hock swelled, and on the outside of the hock was a little hole about what a shot would make. We injected a two percent solution of carbolic acid and bathed it with hot water, and fed him boiled oats and bran. A week ago the swelling went to the inside of the hock; two days after, the flesh came off about three inches broad. We are now poulticing with linseed meal, injecting the acid and bathing with hot water and giving about ten drops of tincture of aconite in water twice a day. It looks cleaner to-day than it has done since it opened inside. Are we doing right?—We also have a mare that has little, white, scurfy spots on her belly and breast. We also have a young heifer supposed to

be with calf, that keeps groaning when she is lying, otherwise she seems healthy."

ANSWER:—As to your colt, I cannot endorse your treatment; at any rate, poulticing and antiseptics do not very well go together. Whenever I apply a poultice to a wound I want to induce suppuration, while antiseptics are employed to prevent it. As to the wound itself, you do not say what produced it, whether it was caused by a gunshot or whether the animal was pitchforked; besides that, I have no idea what morbid changes may have been produced by such an antagonistic treatment as you have applied, and therefore cannot advise you what to do, except to employ a veterinarian to examine the animal and to prescribe in accordance with the result of his examination.—The scurfy spots on your cow, very likely, are of a herpetic nature, an eruption caused by fungi. If you apply once a day, for several days in succession, some tincture of iodine, a cure will be effected.—Your heifer groans because she has her stomach full of food, and as she is with calf, the space in the abdominal cavity is none too large, and the well-filled stomach (paunch) crowds in upon the space in the chest, hence the groaning.



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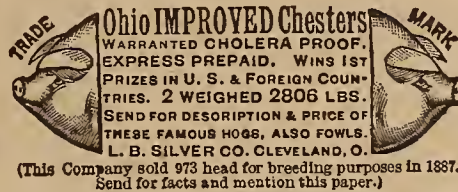
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Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

LIME FOR PROVIDING EGG SHELLS.

It has not been demonstrated that oyster shells, or lime in any form, produces egg shells (or rather, shells for the eggs), as there are thousands of hens that are in no manner provided with oyster shells. It is true, however, that oyster shells, being sharp, assist in grinding the food. Carbonate of lime is insoluble, and the lime for the egg shells must consequently come from that which can be digested and conducted to the eggs through the blood. As nearly all kinds of food contain lime in a soluble form, by combination with vegetable acids, as well as in the form of inorganic salts that are soluble, the process of covering the eggs with shells goes on without the aid of substances that are insoluble. There is one source of soluble lime, however, that is frequently overlooked—the water—which holds lime in a soluble form when it abounds in carbonic acid. Hard, limestone water contains lime, and the hens can, by drinking it, secure more lime in a convenient form than from oyster shells. When a hen lays eggs with soft shells, the cause is due not to the lack of lime, but to the condition of the hen, as she is then, as a rule, in an overfat condition. To this cause may be traced all the eggs with soft shells.

CUTTING OFF THE COMBS.

It has long been a practice among game breeders to cut off the combs and wattles of the males. It is not believed to be a cruel process, but of that we are not so sure, as the removal of any portion of the body is attended with pain to a certain extent. Leghorn breeders are considering the advisability of cutting off the combs in order to avoid the effects of the frost in winter, which cuts off the combs slowly and painfully. The one is done quickly and the other is slow torture. It is not safe to cut off the combs and wattles of old birds, as they bleed very profusely. Young birds (males and females) may be "dubbed" when four months old, or as soon as the comb is well developed. Use a sharp shears or razor. A very sharp knife will answer. Cut off the wattles first and then the comb, and bathe the parts with cold alum water. The solution of alum should be as strong as possible, and the parts well saturated with it. Our advice is not to cut at all if it can be avoided, and subject the large comb breeds only to the process.

A WINTER DISEASE.

We have given the readers several remedies for roup, colds, swelled head, etc., but inquiries still come, which, however, are welcome. In order to assist those who may be new subscribers, we will give this advice: Whenever the eyes and face of a bird are swollen, it denotes exposure to cold draughts of air, usually at night, when on the roost, due to top ventilation, or a crack in the wall. In such cases place the fowl in a dry, warm place. Examination may also disclose a whitish substance in the throat. Once a day anoint the eyes and face with a mixture of one part spirits turpentine to six parts glycerine. Force a drop or two into each nostril, and four or five drops down the throat. If the breathing is hoarse, sprinkle a pinch of chlorate of potash down the throat.

BANTAM CHICKS.

From this time until the approach of cold weather is the time appointed by breeders for hatching out Bantams, the supposition being that the late hatching assists to dwarf them in size. The main point is to avoid lice, and if they are to be hatched in warm weather they will be fit subjects for vermin, which, however, may be avoided by dusting them once a week with fresh Dalmatian insect powder.

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Do you suffer from Dyspepsia, Indigestion, Sour Stomach, Liver Complaint, Nervousness, Lost Appetite, Biliousness, Exhaustion or Tired Feeling, Pains in Chest or Lungs, Dry Cough, Night sweats or any form of Consumption? If so, send to Prof. Hart, 83 Warren St., New York, who will send you free, by mail, a bottle of *Floraplexion*, which is a sure cure. Send to-day.

UNDRAWN FOWLS.

In some markets fowls cannot be sold if drawn, while in others they must be drawn. In the Richmond, Va., market all fowls exposed for sale must not only be drawn, cleaned, and be perfectly fresh, but the heads must be removed and the shanks cut off at the knees. The thighs are then nicely passed into the skin near the opening, and the wings locked (or crossed). This must be done under penalty of confiscation, and it is a practice that is worthy of imitation elsewhere, as the entrails are the first portions of the carcass to decompose. It is also to the advantage of the farmer, as the drawn fowl can be salted, and made to bear transportation better.

TARRED PAPER AND MOISTURE.

As quite a number of poultrymen find frost on the walls covered by tarred paper in winter, and as the tarred paper will be used this summer in the construction of poultry-houses, it would not be out of place for some of our readers to give their experience with it. It will not be affected by the weather when used on the roof, and covered with a coating of tar, but we find that it becomes soft on wet days and hard on dry days, which indicates that it absorbs moisture. If our surmise is correct, the appearance of frost on walls lined with tarred paper is due to the absorption of moisture from the air.

HEAVY FEEDERS.

It is claimed that a Brahma will eat twice as much as a Leghorn, and this is true, but she should not be allowed all she can eat. A matured Brahma fattens very rapidly as it is not an active breed, but she does not lay any more eggs than a Leghorn, and therefore performs no greater service. If fed in a manner to keep her in good laying condition, she will not be injured from the supply of food being limited, but will keep in better health.

PIGEONS ON FARMS.

Pigeons do considerable damage at certain seasons (when seed is put in), but later on they catch worms. When the grain is ripe they will eat it, and a large portion is also wasted. The proper way to keep pigeons is to confine them in yards made of wire, ten feet high, and covered so as to prevent escape.

CORN AND CORN MEAL.

Corn and corn meal are the staple foods of fowls and chicks on the farm, and they cause more disease and loss than any other foods; not that such food is injurious of itself, but because it is fed too exclusively, tending to make the birds fat, yet not supplying the needed elements of eggs and growth. Where the hens have a range they balance the food by securing grass and insects, which accounts for the good results obtained from corn, but if the flock is kept on a small area the hens have no opportunity to vary the food, and the consequence is that they often refuse it because nature prompts them that corn alone is injurious. Corn may be fed, especially in winter, but the hens should have other food as well, so as to afford a variety.



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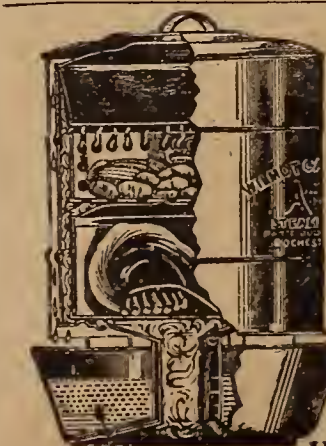
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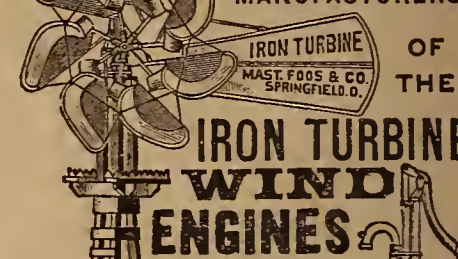
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Looking seaward well assured
That the word the vessel brings
Is the word they wish to hear.
—Emerson.

VIRTUE is like precious odors, most fragrant
when they are luscious or crushed.—Lord
Bacon.

BEECHAM'S PILLS cure sick-headache.

THE essence of true nobility is the neglect of
self. Let the thought of self pass in, and the
beauty of great action is gone, like the bloom
from a soiled flower.—Froude.

THE golden moments in the stream of life
rush past us, and we see nothing but sand; the
angels come to visit us, and we only know them
when they are gone.—George Eliot.

If any of our readers wish employment they
cannot do better than canvass for the en-
larged portraits of the well known firm of F.
H. Williams & Co., 633 and 635 Broadway, New
York. Send to them for circulars.

Look not mournfully into the past; it comes
not back again. Wisely improve the present;
it is thine. Go forth to meet the shadowy
future without fear and with a manly heart.
—Longfellow.

AN old painter watched a little fellow who
amused himself making drawings of his pot
and brushes, easel and stool, and said, "That
boy will beat me one day." So he did, for he
was Michael Angelo.

BE not slow in common and usual acts of
devotion and quick at singularities; but, hav-
ing first done what thou art bound to, proceed
to the extraordinary of religion as you see
cause.—Jeremy Taylor.

WHEN we think of Africa we are apt to think
of it only as a desert. But the fact is that
central Africa, especially, is a very beautiful
country. The land is rolling and covered with
forests. The scenery is diversified. There are
rivers and waterfalls and lakes, one of which,
Victoria Lake, is as large as the state of New
York. Besides, the country has a population
of 200,000,000, more than twice the number of
people who dwell in the western hemisphere.

ALTHOUGH people talk glibly about a mil-
lion bushels of wheat, but very few of them
(says Iron) realize what a vast amount that
represents. If a million bushels were loaded
on American freight cars, 500 bushels to a car,
it would fill a train over fifteen miles long; if
transported by wagon, 44 bushels per wagon,
it would make a line of teams 142 miles long.
If made into bread, reckoning a bushel to 60
pounds of flour, it would give each man, woman
and child in the United States a two-
pound loaf of bread.

FRANCES WILLARD urges women to read the
newspapers. She says: "Women are a set of
passive-ions on that subject, as a class; and I am
never more annoyed for my 'set' than when
the newsboy goes trotting through at full
speed, if he finds the car contains chiefly
women, never dreaming that they want a
paper. I clutch his sleeve with a vim, and
buy one of every variety he has, and ask him
what he is thinking about to lose patronage in
that way. Gossip is nothing but small news—
the nickels, pennies and dimes, while the
newspaper deals in dollars and V's and X's;
so it widens the mind more to read the news-
papers than to gossip about the neighbors.

"A \$2 WASHING MACHINE FREE."

To introduce them, we will give away 1,000
self-operating washing machines. No wash-
board or rubbing required. If you want one
send to the Monarch Laundry Works, 23 Pa-
cific Ave., Chicago, Ill.

CULINARY MAXIMS.

Beauty will buy no beef.
Inquire not what is in another's pot.
Better half an egg than an empty shell.
A good stomach is the best sauce.
Better some of the pudding than no pie.
He who depends on another dines ill and
supps worse.
Make not your sauce till you have caught
your fish.
He that dines and leaves lays the cloth
twice.
He deserves not the sweet who will not taste
of the sour.
He fasts enough whose wife scolds at dinner
time.
He who would have hare for breakfast must
hunt over night.
When a man cannot have what he loves, he
must love what he has.—Table Talk.

A CHANCE FOR OUR YOUNG FRIENDS.

In another column appears the announce-
ment of the Waterbury Watch Co., offering
prizes for the best essay upon "What the
Waterbury Watch Has Done for the World." Here
is a grand opportunity for those readers
of the FARM AND FIRESIDE who first became
acquainted with the Waterbury Watches
through advertisements in our columns sev-
eral years since. Try your hand and give as suc-
cinct an account of your experience with the
famous Waterburys as you can write. Per-
haps you may prove to be one of the winners.

HOW TO USE THE PEN.

Every time you are tempted to say an un-
gentle word, or write an unkind line, or say a
mean, ungracious thing about anybody, just
stop; look ahead twenty-five years, and think
how it may come back to you then. Let me
tell you how I write mean letters and bitter
editorials, my boy. Sometimes, when a man
has pitched into me and "cut me up rough,"
and I want to pulverize him and wear his
gory scalp on my girdle, and hang his hide on
my fence, I write a letter or editorial that is
to do the business. I write something that
will drive sleep from his eyes and peace from
his soul for six weeks. Oh, I do hold him over
a slow fire and roast him! Gall and aqua
fortis drip from my blistering pen. Then, I
don't mail the letter, and I don't print the
editorial. There's always plenty of time to
crucify a man. The vilest criminal is entitled
to a little reprieve. I put the manuscript away
in a drawer. Next day I look at it. The ink
is cold; I read it over and say, "I don't know
about this. There's a good deal of bludgeon
and bowie-knife journalism in that. I'll
hold it over a day longer." The next day I
read it again. I laugh, and say, "Pshaw!"
and I can feel my cheeks getting a little hot.
The fact is, I am ashamed that I ever wrote
it, and I hope that nobody has seen it, and I
have half forgotten the article or letter that
filled my soul with rage. I haven't hurt any-
body, and the world goes right along, making
twenty-four hours a day as usual, and I am
all the happier. Try it, my boy. Put off your
bitter remarks until to-morrow. Then, when
you try to say them deliberately, you'll find
that you have forgotten them, and ten years
later, ah! how glad you will be that you did!
Be good natured, my boy. Beloving and gentle
with the world, and you'll be amazed to see
how dearly and tenderly the worried, tired,
vexed, harassed old world loves you.—R. J.
Burdette.

RANCHING IN SOUTH AMERICA.

In 1885 there were 41,000,000 sheep in the United
States, 72,000,000 in Australia, and 100,000,000 in
the Argentine Republic. We have two thirds of
a sheep to every inhabitant; in the Argentine
Republic there are twenty-five sheep, and in
Uruguay forty sheep, to every man, woman
and child. We have 40,000,000 of horned cattle,
a population of 60,000,000; the Argentine Re-
public and Uruguay have 38,000,000 of cattle to
a population of 4,000,000. In Uruguay, with a
population of 500,000 souls, there are 8,000,000
of cattle, 20,000,000 of sheep, 2,000,000 of horses,
or 60 head of stock for each man, woman and
child. \$15,000,000 have been invested in wire
fences in Uruguay alone, and more than twice
as much in the Argentine Republic. In either
of these countries a cow can be bought for \$5, a
steer fattened for the market for \$10 or \$12, a
pair of oxen for \$25, a sheep for 50 or 60 cents,
an ordinary working horse for \$8 or \$10 and a
roadster for \$25, a mule for \$15, and a mare for
whatever her hide will bring. Mares are never
broken to saddle or harness, but are allowed to
run wild in the pastures from the time they
are foaled until they cease to be of value for
breeding, when they are driven to the saladeros
or slaughter houses and killed for their hides.
A man who would use a mare under the sad-
dle or before a wagon would be considered of
unsound mind. There is a superstition against
it.—Harper's Magazine.

THE LARGEST FAMILY ON RECORD.

In the Harlequin MSS., Nos. 980 and 78, in the
British Museum, there is an extraordinary
fact mentioned; namely, that a weaver in
Scotland had by one wife, a Scotch woman,
sixty-two children, but only four daughters
of these lived to be women. Forty-six sons,
however, attained their majority. Most of the
sons were living in the year 1630 at Newcast-
le-on-Tyne, and it was recorded in the early his-
tories of Newcastle that a wealthy gentleman
rode thirty miles beyond Edinburgh in order
to prove the matter. It is said that Sir J. Bowes
adopted ten of the sons, and three other gentle-
men also took ten each. The rest were brought
up by the parents.

HOSPITAL REMEDIES.

A NEW DEPARTURE IN TREATING DISEASES.

What are they? The growth of intelligence
in medical matters has given rise to a demand
for a class of genuine, reliable medicine. The
opportunity of the ignorant quack, who grew
rich curing everything out of a single bottle,
has passed. To supply satisfactorily this de-
mand this list of remedies has been created.
They are the favorite prescriptions of the
most famous medical practitioners of the day,
gathered from the hospitals of London, Paris,
Berlin and Vienna. Prescriptions which cost
the patients of these specialists from \$25 to
\$100 are here offered prepared and ready for
use at a nominal price. Not one of them is a
cure all; each one has only the reasonable
power of curing a single disease, and each one
keeps its contract. Sufferers from Catarrh,
Diseased Lungs, Bronchitis, Asthma, Con-
sumption, Rheumatism, Dyspepsia, Liver and
Kidney Complaints, Fever and Ague, Neu-
ralgia, Female Weakness, Leucorrhoea or
Nervous Debility, should send stamp for de-
scriptive catalogue to Hospital Remedy Co.,
Toronto, Canada.

One Hundred Dollars Given Away!

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—OFFER—

Four Prizes for the Best Essay

UPON THE SUBJECT:

"What the Waterbury Watch Has Done for the World."

The following are conditions for competition:

- First**—The essay must not contain more than one thousand words.
- Second**—The writer must be between the ages of twelve and twenty-five years.
- Third**—Each essay must be forwarded with some recognized retail watch dealer's certifi-
cation that the writer is within the specified age.
- Fourth**—The article must be written on one side of the paper only.
- Fifth**—For convenience of the type-setter it is preferable to use slips of paper about five
inches wide and not over eight inches long—each sheet being numbered consecutively.
- Sixth**—We cannot return rejected MSS., but should we use any besides the four prize
winners' we will pay therefor an equal amount to the lowest prize—\$10.00.
- Seventh**—The Judges will be L. J. Mulford, Editor of *The Jewelers' Circular*; John W.
Senior, Editor of *The Jewelers' Review*, and Geo. A. Reed, Editor of *THE WATERBURY*.
- Eighth**—All competing Essays must be mailed on or before December 14, 1889.
- Ninth**—Each Essay should be signed with a non-de-plume and accompanying it a sealed
envelope with the non-de-plume upon its face. This, of course, should be put within the
cover of the manuscript. Inside the enclosed envelope should be a slip of paper with
the non-de-plume written upon it and below that the writer's full address. This envelope
will not be opened until after the judges have made their award. Follow these direc-
tions explicitly.
- Tenth**—All communications must be addressed to the "EDITOR OF THE WATERBURY,"
92 and 94 Liberty Street, New York.

The Waterbury Watch Company, in addition to their famous "Long Wind," "Series E,"
are making new watches: One, the series "J," for Gentlemen, is a short wind, with stem
set and seconds-hand; the other, series "L," smaller size, also short wind. These are de-
servedly popular, and are for sale ONLY by regular retail watch dealers.

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25 Beautiful Hidden Name and Shape Cards, 2 Rings, and New
Book of 125 New Pictures and Cards to all Agents, 10c. All
New for 1890. CURTIS & CO., North Haven, Conn.

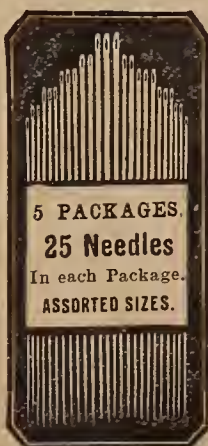
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Fits any size
Spool. Sample
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Wanted.
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Mention this paper. A. W. Sawyer, Prov., R. I.

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6 superb numbers of this Largest and Best
practical art magazine, indispensable for all wishing
to learn Oil, Water-color, or China Painting,
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140 Best Needles And 280 Pins

Premium No. 690.

This new Needle Case, when open, is 2½ by 9½ inches in size, and contains
5 packages of Needles, with 25 best, large-eyed needles in each paper, as-
sorted sizes. Also a collection of 15 first-class Needles, consisting of Darn-
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Needles, and one Bodkin. Also a paper containing 280 Pins, usual size for
the household. The makers warrant the Needles not to break or bend if
properly handled. They come in a fine lithographed card of 8 colors.

Given as a premium to any one sending 2 three-months' trial subscribers
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the new subscriber is not entitled to a premium.

Price, including one year's subscription, 70 cents.

We offer them for sale for 25 cents. Postage paid by us in each case.

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THRILLING Detective Stories, 16 Com- plete love stories and 100 Popular Songs, 10 cents (silver). Ind. Nov. Co., Boylston, Ind.

100 Popular Songs, no 2 alike 10c.; 300
for 25c.; 600 for 50c.; 1200 for \$1.; 2500
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H. J. WEIDMAN, 180 Park Row, N. Y.

Your Name on this Stamp in Rubber 12c. Club of 10
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Kidney, Liver or Stomach Troubles

in three months or less, or fail to GIVE YOU GREAT
RELIEF in three weeks or less, we charge you nothing.
Agents Wanted. Address,
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Keeps the blanket from blowing
or sliding off the horse. Attached
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namental nickel plate. Nothing
like it in the market. A gold
mine for agents. Sample set, 25 cents. One dozen
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PHILADELPHIA SINGER.
15 days' trial. Warranted 5
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OPIMUM HABIT. The best cure known can
be had before payment is made.
DR. M. C. BENHAM & CO., Richmond, Ind.

Smiles.

A CHOICE.

Gone are the happy summer days,
And now, just o'er the distant hills,
Hangs like a screen a purple haze,
And color all the woodland fills.
The trees may don their royal dress,
But, ah! no kingly robe is mine!
Of my two loves I loved one less,
And now that love has ceased to shine.

Clouds hid that sun of love from me—
Tobacco clouds were they in fact—
No maid was ever fair as she,
And no one ever more exact.
I loved her, yet loved my cigar;
To wed no smoker did she vow;
I had to choose—to cast afar
Love or my smoke—I'm smoking now!

—Life.

COUNTRY CORRESPONDENCE.

MUSHBURG, OHIO, Oct. 30.

EDS. FARM AND FIRESIDE:—The last batch of items I sent you C. O. D., from this neck of woods, did not get into the paper for some reason mutually unknown to all of us. Among them were a number of news that I regret to see get missed by your sheet. I am the only journalist in this township who works at his trade, and I hope I am not fresh when I say that my items are worth publication in almost any clime. If the items missed connections on the local freight and are lost in the thicket, I do not complain. But if they were crowded out by advertising or editorial, it is not my fault. You fellows probably know your business, although I can't believe my items were given the right kind of a show.

The town is dull this week. Mr. B. T. Smith, the genial and rising young cooper and road trustee, was interrupted during his dinner last week by death. His funeral was a recherche affair. The pall-bearers had on black, four-in-hand ties, and acted decent.

The Mushburg Leader and Pulverizer suspended publication last week, after a varied career of two editions. Mr. P. Swamp, the editor, is now away on a visit to friends in various parts of the world. Several of his bills were left in a nervous, unsettled condition.

Mr. John Shumpley, of the Pancoast settlement, has gone east to visit the twin falls at Niagara, and other pour relations.

Dan Skinner's dog caught a rat last Saturday. He then killed it. Much excitement prevails.

The Loon, Esterbrook & Humpley Dramatic Company played "O'Thello" here last night in Greavy's school-house. The show is one of the best we have ever saw. The play is a good one, but gloomy. The act in which O'Thello smothered Desdemona is the best thing in the show. The way they played pillow in their season was better than anything ever seen in the town since the singing-school gave a concert last spring. Quite a handsome sum was realized, the net receipts footing up to \$18.30. Your correspondent got into the performance without paying nothing.

C. E. Winewurst has a new buggy, and the girls is all not saying a word. Ah, there, Charlie.

Politics are dull. We are a candidate for road supervisor, and we trust that nominations will now close.

Chas. C. Kehrens, of this city, went to San Francisco for a day or two day. He will Tuesday forenoon on Pike's peak, located on the Rocky mountains, west of here.

Eggs are scarce. The hens are not onto the bird-en of their lay.

The farmers report the chicken crops good. Mr. Chas. Heartsease, the undertaker, has added cigars and tobacco and a choice stock of groceries to his already large trade in the burial business. Mr. Heartsease never fails to give satisfaction to the parties whom he enters. He has a lot of grave-clothes that he will sell cheap.

A man on Main street was killed by a mau, last Thursday. We have been busy, and did not learn the names.

Mr. C. E. Flicker is at Europe for a few days. We wish him success.

EDGAR ALLAN MORGAN.

WHICH WOULD HE HAVE?

Fortune-hunting young man—"I have called, sir, to solicit the hand of one of the daughters of the mansion."

Aristocratic father (looking him over scornfully)—"Cook or chambermaid?"—*Texas Siftings*.

A PEACEABLE MAN.

Badger (mad and excited)—"Say, your dog ate up seven of my hens last night. What are you going to do about it?"

McGall—"Well, if it don't make the dog sick, I won't do anything about it."—*Life*.

CATARRH CURED.

A clergyman, after years of suffering from that loathsome disease Catarrh, and vainly trying every known remedy, at last found a prescription which completely cured and saved him from death. Any sufferer from this dreadful disease sending a self-addressed stamped envelope to Prof. J. A. Lawrence, 88 Warren street, New York, will receive the recipe free of charge.

WHAT TOUCHED HER MOST.

They were sitting on the piazza of the hotel at the beach, watching the moon as it slowly rose out of the slumbering sea. Silence was around them, naught being heard save occasionally the faint clatter of dishes in the adjacent restaurant, or the musical hum of an aristocratic mosquito that was making as vain a search for a blue-blooded person as Diogenes did for an honest man. It was the hour for love—sweet, pure, delicious love. The youth felt it in his soul as he sat there by the side of the beautiful maiden, whose silken hair almost touched his shoulder. Suddenly he spoke in low but thrilling and passionate tones.

"To the poetic temperament, to the soul that is capable of feeling the tenderest emotions, that throbs in unison with the harmony of nature, and is susceptible to the influences of the beautiful, there is a peculiar fascination in a scene like this. The balmy air, the rising moon, the twinkling stars, the contiguity of one of the fairest of creation's most perfect work, all nite to awaken in the heart its softest, sweetest, tenderest feeling—love. Don't you think so, Mehitable?"

"I do. Oh, George, don't them baked clams smell nice?"—*Boston Courier*.

SOMETHING TO SHOW.

Men are too ready to assume that women, as they say, know nothing about business. Some women are ignorant of such matters, it is true, but on the other hand some women have quite as much business capacity as their husbands.

"Do you mean to tell me, Mrs. Billus," demanded Mr. Billus, angrily, "that you gave a total stranger an order for ten dollars' worth of groceries at prices less than wholesale dealers can buy them, and paid him for the goods in advance? Didn't you have sense enough to see that it must be a swindle? Your money's gone now, and you've nothing to show for it."

"Why, yes, I have," said Mrs. Billus; "I have his receipt for it."—*Youth's Companion*.

SUSPICIOUS SUBMISSION.

A small boy had been having a day of unmitigated outrageousness, such as all children who do not die young are likely to have at times, and when he was ready for bed his mother said to him:

"When you say your prayers, Georgie, ask God to make you a better boy. You have been very naughty to-day."

The youngster accordingly put up his petitions in the usual form, and then before closing with "amen" he added, "And please, God, make me a good boy." He paused for a second, and then, to the utter consternation of his mother, concluded with unabated gravity, "Nevertheless, not my will, O Lord, but thine be done."

LITTLE BITS.

She—"Do you love me still?" He—"Yes, dear." And then she thought, and then he thought, and she wondered if he saw it, and he wondered if she saw it.—*New Hampshire Patriot*.

Fond lover (after a long-delayed proposal)—"Perhaps I have been too sudden, darling."

Darling girl (regaining her composure with a mighty effort)—"Yes, George, it is very, very sudden, but"—and here she became faint again—"it is not too sudden."

He—"You remind me of an angel."

She—"Oh, now, you are going to pay me some silly compliment."

He—"Not at all. Your dress this evening is so like the kind the angels wear."—*Lawrence American*.

A countryman was ordering a tombstone for his brother.

"And what sized letters do you want us to use for the inscription?" asked the man of marble.

"Oh, the biggest you've got. He was awful near-sighted."

An Anglo-Indian lady boasted that her Chinese cook was much cleaner than her neighbor's Indian chef. They visited the respective kitchens. The Indian's pots and pans and utensils of all kinds were filthy. The Chinaman's vessels shone like mirrors, and Chang himself was sitting on his box, washing himself in the soup-tureen.

"Charley," cautioned his mother, "the bishop is to dine with us to-day, and you must be very quiet at the table. I want him to think that you are a good little boy." Very much impressed, Charley ate his dinner in silence until his plate needed replenishing. "Pa," he said, devoutly, "will you give me some more string beans, for of such is the kingdom of heaven?"

"Did you saw that wood I told you about?" asked the lady of the house of the tramp to whom she had given a dinner.

"Madam," he replied, and a look of contempt flitted across his tawny face, "I am surprised that so good a cook and housewife as you should be so ungrammatical. You should say, 'Did you see that wood?' 'Saw' is proper only in a question referring to the perfect tense. I cannot work for one so uncultured, for fear I should be contaminated. Ta ta."—*Lawrence American*.



An Unequaled Triumph.
An agency business where talking is unnecessary. Here are portraits of Mrs. Anna Page of Austin, Texas, and Mr. Jno. Bonn of Toledo, Ohio. The lady writes: "I do business at almost every house I visit. Every one wants your grand photograph album, and were I deaf and dumb I could secure orders rapidly." The man writes: "Your magnificent album is the greatest of all bargains, the people generally are wonder-struck and order at sight. The orders taken last week pay me a profit of over \$100. This is the chance you have been looking for. You can make from \$5 to \$25 and upwards every day of your life. Talk not necessary. You can make big money even though you don't say a word. Our new style album is the grandest success ever known, and the greatest bargain in the world. Double size—the largest made. Bound in richest, most elegant and artistic manner, in finest silk velvet plush. Bindings splendidly ornamented. Inside charmingly decorated with most beautiful flowers. It is a regular \$10 album, but it is sold to the people for only \$2. How can we do it? It is the greatest hit of the times; we are manufacturing 500,000, and are satisfied with a profit of a few cents on each. Agents wanted! Any one can become a successful agent. Extra liberal terms to agents. We publish a great variety of Bibles and testaments; also subscription books and periodicals. Agents wanted for all. Our agents are always successful. We do the largest business with agents in America, and can give larger value for the money and better terms than any other firm. Particulars and terms for all of above mailed free. Write at once and see for yourself. Address H. HALLETT & CO., Box 561, Portland, Maine.

FREE SAMPLE CARDS for 1890. New Styles, Beautiful Designs. Low prices and BIG OUTFIT FREE. Send 2c. stamp for postage. U. S. Card Co., Cadiz, O.



ENGLISH DECORATED

Dinner Set, No. 90, 112 Pieces.

Premium with an order of \$20.00.

Or packed and delivered at depot for \$8.50 Cash. We have hundreds of other Sets, plain and decorated.

THE LONDON TEA CO., 795 Washington Street, Boston.

OLD DR. BROWN'S SAFE OPEN



DO YOU WANT MONEY?

\$13,000,000 is a Big Pile of Money to GIVE AWAY, but as I have got rich myself, I am ready to help others in my advancing years. It has always been said, When Old Dr. Brown opens his Safe Door, it is ready to let you into the Secrets of Money Getting. Some persons, assisted by me, have made from \$2,000 to \$20,000 in ONE YEAR. YOU CAN DO THE SAME. Young or Old, Lady or Gent, money does not keep. It is going to be put out; now be sure and come in for your share. All want to get rich, enjoy the good of life. I (my agents) of Gold to guessing the ber of Silver pile under it.

This pile of bills held in my hand, ranging from \$1 to \$100 each, to those coming the nearest, as soon as 13,000 answers have been received. All you have to do is to enclose 12 cents with each guess you make, simply to pay for registering, &c., and I guarantee to send every one a box of goods FREE, that you can realize a fortune from, if directions are followed. As millions will read this notice, 13,000 answers should come in thirty days.

A FORTUNE FOR ALL

GUESS How many Silver Dollars are in this Pile.

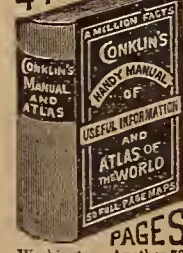
SPECIAL. To every one sending 12 cents answering this advertisement before 30 days, I will enclose a Cash Certificate at \$30c. This is a free gift to every one. Address

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The story of that marvelous movement, known as the Women's Crusade, by its marvelous leader, Mother Stewart. Told as no one else could tell it. As thrilling and attractive as anything ever written by Gough. —*Farm and Fireside*. Best terms to AGENTS. Price, \$2.00. Address Mother Stewart, Springfield, O.

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And both sang cheerily—
"We like this Yankee weather,
Oh, yes! Wee, wee, wee, wee!"

For this was when the sun was warm
And beaming from the sky;
But when the cold, cold winter came
They homeward longed to fly,
And Mr. Sparrow sadly chirped,
"My dear, I'm 'traid we'll die!"

Then some kind friend a warm box placed
High in that maple tree,
Where Mrs. Sparrow built a nest,
And sang right merrily—
"Though Yankee weather's cold and hard,
Yankee hearts are warm, wee, wee!"
—Nora Laughlin, in the Pansy.

HOW TO CURE A COLD.

When one becomes chilled, or takes cold, the mouths of myriads of little sweat glands are suddenly closed, and the impurities which should pass off through the skin are forced back to the interior of the body, vitiating the blood, and putting extra work on the lungs and other internal organs.

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The time to treat a cold is at the earliest possible moment after you have taken it, and your prime object should be to restore the perspiration and the capillary circulation.

As soon, then, as you feel that you have taken cold, have a good fire in your bedroom. Put your feet into water as hot as can be borne, and containing a tablespoonful of mustard. Have it in a vessel so deep that the water will come up well toward the knees. Throw a blanket over the whole, to prevent rapid evaporation and cooling. In from five to ten minutes take the feet out, wipe them dry, and get into a bed on which there are two extra blankets.

Just before or after getting into bed, drink a large glassful of lemonade as hot as possible, or a glass of hot water containing a teaspoonful of cream of tartar, with a little sugar if desired.

Should there be pain in the chest, side or back, indicating pleurisy or pneumonia, dip a small towel in cold water, and wring it as dry as possible. Fold the towel so that it will cover a little more surface than is affected by the pain. Cover this with a piece of flannel, and both with oiled silk, or better, with oiled linen; now wind a strip of flannel a foot wide several times around the chest.

The heat of the body will warm the towel almost immediately, the oiled linen and flannel will retain the heat and moisture, and steaming the part will generally cause the pain to disappear.

Should there be pain or soreness in the throat, you should treat it in a similar manner with wet compress and flannel bandage.

Eat sparingly of plain, simple food. Baked apples and other fruit, bread and butter, bread and milk, milk toast, baked potatoes or raw oysters may be eaten.

By following the above directions intelligently and faithfully, you will ordinarily check the progress of the cold, and prevent serious, possibly fatal, illness.—*Youth's Companion.*

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Oats, ".....	17 1/2 @ 23 1/2	24 @ 34	30 @ 36
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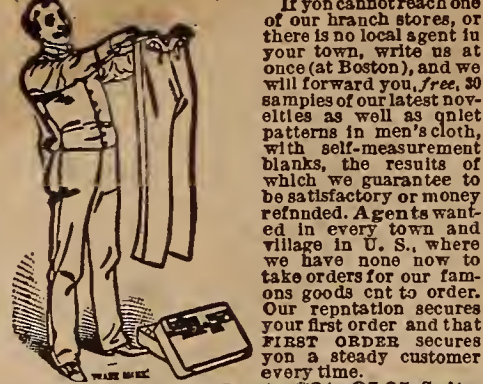
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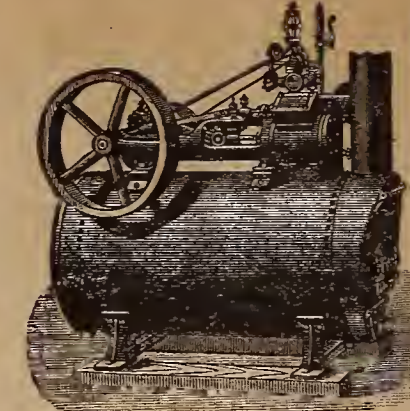
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18 PAGES, WITH SUPPLEMENT.

EASTERN EDITION.

VOL. XIII. NO. 5.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, DECEMBER 1, 1889.

TERMS {30 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

250,800 COPIES.

The Average Circulation this year, or for the
23 issues since January 1, 1889, has been

240,217 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,000 copies, the Western edition
being 150,000 copies this issue.

Current Comment.

IN our November 1st issue a brief reference was made to the Farmers' League in Massachusetts, organized for the purpose of electing members of the state legislature pledged in favor of a bill to prohibit coloring oleo like butter. The result of the election shows that the work of the league was a decided success. In fact, the farmers have gained a great victory. An overwhelming majority of the members elect of each branch of the legislature are honest butter men.

The result shows the wisdom of the course pursued by the league. It was non-partisan. No new party was formed, but the farmers simply voted for the candidates pledged to stand by them, and elected them. That's all there was of it. In districts where all the candidates were pledged alike, the voters did not step outside their party lines. But in districts where the candidates differed on the oleo question, party lines were disregarded. The course of the league was sensible and successful. It was practical politics. It has demonstrated just what can be done in nearly every state in the Union. There is no sense in farmers standing around grumbling about adverse legislation when it is within their power to remedy it. They hold the balance of political power, and the fault is their own if they do not make good use of it. A political non-partisan organization like the Massachusetts Farmers' League can bring the different parties to terms on any important issue affecting agriculture.

VERY earnest discussion is now going on about the abandoned farms in some parts of the New England states. Various are the reasons assigned for the decline in agriculture, and various are the means proposed to repopulate these farms. The movement from these farms has been a gradual and a natural one. People left them simply because they could do better, or thought they could do better, elsewhere. Some went to manufacturing cities, and some went to new agricultural fields in the West or South. No blame can be attached to them for going where and doing what they could do best. If they did not or could not make a fair living on these farms, they ought to have gone.

There is a vast deal of time and talk wasted in deploring the fact that the rural population of this country is not increasing at as fast a rate as the city population, and that manufacturing industries are increasing faster than agriculture. Those who indulge in woful lamentations over the change that is going on, overlook the important fact that there is an abundance of every farm crop produced to-day.

While the rural population has not increased at the same rate as the city population, agricultural products have increased at a much greater rate than the total population. Improvements in methods of farming and the substitution of improved farm machinery for hand labor, have made it possible for a less proportion of the total population to produce all and more than is needed of farm crops. That is all there is in the change of ratio between the country and city population, and the ratio will go on decreasing with the continued advance in agriculture and improvements in farm machinery. The change is natural and inevitable. It is due to the increased power of production. It is not a deplorable one in the least. There is no need or use of lamenting over it.

If the ratio of persons engaged in farming to all others had remained the same, it is clear that, with their increased power of production, there would now be such an oversupply of farm products that prices would be so low that farmers would receive little or nothing for their labor. And the depreciation of all farm values would be simply enormous.

As to these abandoned farms, they have been deserted either because they were too poor to furnish their tenants a living, or the latter did not understand their business well enough to make a living off them. In either case, the best thing for them to do was to go. As there is more in the man than in the land, it is more than probable that the main cause of their going was that they did not thoroughly understand the business of farming. The trouble was more with the farmer than the farm. Now the best remedy for that may be summed up in one word, education. Education of the farmer, to help him understand his business, is the aim of our agricultural schools, experiment stations, press, boards, societies and organizations. They can all help, but after all, the most depends on the man himself.

THE profits made in grain gambling ultimately come off the grain growers. It is argued that speculation in futures is a benefit to the farmer, because it sometimes advances the price of grain above the normal point. The sophistry of the argument is apparent. The injuries of grain gambling far outweigh the benefits. Gambling produces no wealth. The wealth obtained by gamblers was originally the property of honest labor. There is a movement in favor of legislation against this formidable evil of grain speculation. In a recent issue the *Rural World* says:

The speech of Gov. Colman before the Interstate Wheat Growers' convention has created much discussion and consternation among the bulls and bears of the wheat product throughout the country. His earnest words in behalf of the necessity of adopting some means to stop this gambling in the farmers' products, selling three or four or twenty times as much as the farmer raises, putting upon the market fictitious amounts, to any extent that cheek and money may carry them, call attention to an evil of great magnitude which is having most injurious effects upon the prices of wheat, not only throughout this country but throughout the world, for Chicago is looked up to as the most important market in the world in fixing the price of wheat, and has great influence in controlling prices at Liverpool. If the farmers will demand of

their representatives that this evil be checked, that unless it is checked they can no longer depend upon their support, it will not be long before some means is found to stop a business having so damaging an effect upon the farmers' products. The remedy suggested by Gov. Colman of requiring all dealers in futures to obtain a license from the internal revenue department of the government, and then to tax those taking out licenses on the volume of their business, seems to be a feasible plan, and ought to be tried thoroughly, and, if it be found that this cannot be put in effect, some other and better plan should be tried. Farmers have too much at stake to let the present condition of things continue longer. If our present representatives will not take this matter in hand, see to it that those elected next time will attend to it. They are elected to serve you.

THE collapse of the great cotton-seed oil trust illustrates what we have said about trusts containing within themselves elements of self-destruction. Their days are numbered. Sound legislation will finish the work. Trusts may come and go, but large combinations of capital will remain. We have reached a period in the industrial development of the country specially marked by the aggregation of capital. It is taking place on every hand, and in every line of business. Large manufacturing are taking the place of small shops. The big store has swallowed up half a dozen little ones. The milling business illustrates the change that is going on. The small mills are going. They cannot compete with the big mills. Why? Simply because the large mill can convert wheat into flour and place it in the hands of the consumer at a less cost than the small mill. A single one of the great Minneapolis mills has a capacity of seven thousand five hundred barrels of flour per day. A net profit of only five cents per barrel amounts to something in a mill like this. It is said that some of the big mills are making and selling flour at a profit of five cents per barrel as a regular business. Now, it is plain that the consumers are benefited by having wheat converted into flour as cheaply as possible. There is no danger in a great combination of capital, as long as it is engaged in a strictly legitimate business. So long as it does that, it is a great public benefit. It is when it seizes control of the market, and fixes the price to both the producer and the consumer, that it is against the public welfare. This is what legislation must prevent, and when it has done that, it has done all that is necessary.

THE first report of the Secretary of Agriculture is a straightforward, business-like document. Secretary Rusk seems to fully realize the responsibilities he has assumed, and to be earnestly striving to lay solid and enduring foundations for the new department of agriculture. At the very outset in his work of reorganization, however, he finds himself hampered by a lack of means. The appropriations made by the last Congress are inadequate to the urgent needs of the department. Even the old department had outgrown the provisions made for it. The estimates he makes for the coming year are very modest compared with the appropriations made by other governments for the same purpose. It is to be hoped that Congress will answer his

manly appeal. The report contains a brief but comprehensive review of the work of the several divisions of the department, and is interesting reading throughout.

WHEREVER the Australian ballot system was tested in the recent elections it proved a complete success, and received the almost unanimous approval of the voters. There is a strong and growing demand for ballot reform, and the decided success of the Australian system, on its first trial in this country, will lead the people of many states to reform their election laws in the near future. Whether this particular system is adopted or not, its main features will be embodied in the reform ballot laws. The main purpose of the Australian system is to prevent intimidation and bribery of any kind whatever by securing absolute secrecy to the ballot. It gives the voter a private path to the polls, and he can walk up and put his ballot in the box without being annoyed or interfered with in any way. Secrecy to the ballot works indirectly but effectually against bribery or intimidation. The bribe-taker is not to be trusted. Unless the bribe-giver can watch the bribe-taker, and be sure how he votes, practical business sense will keep him from taking any risks. Reform ballot laws will result in much more independent voting than there has ever been before. Voters will be bound less by party lines. This will result in the selection of better candidates by party organizations. Altogether, ballot reform can and will do much to purify politics and give good government to the people.

ON the Rothamsted experiment farm of Sir John Lawes, wheat has been grown on the same land every year for forty-six years. The average yield for the thirty-six years ending with 1887 was 13¼ bushels per acre. This may be considered to be about the best yield obtainable by good cultivation, without manures or rotation of crops. Since it is greater than the average yield per acre in all the great wheat producing countries, there must be some profit in it, or wheat culture would be abandoned. And so of other crops. It is possible, then, by reducing in various ways the expenses of growing and caring for crops to their lowest limit, to make some profit for a long series of years by a system of farming that makes no use of fertilizers of any kind. But for those who can go further it is unwise to stop at this point, or follow such a system. Taking it as a starting point, increase the expenses of growing crops by the judicious use of fertilizers. The yield increases, and the profits are multiplied. Up to a certain point the yield increases at a much greater rate than the expenses. This is why good farming pays. Therefore, increase the expenses of growing crops judiciously but fearlessly, and keep it up as long as production is increased at a greater rate than the expenses.

Capital invested in fertilizer is just like putting it in any plain, safe, business investment. The returns will depend, in a large measure, on the good, business-like sense and judgment used in making the investment.

FARM AND FIRESIDE.

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Our Farm.

AGRICULTURAL CHEMISTRY

From the Standpoint of the Practical Farmer.

BY JOSEPH (TUISCO GREINER).

No. 22.

COTTON-SEED MEAL, CASTOR POMACE, ETC.—Among sources of nitrogen not yet named, cotton seed and cotton-seed meal are probably in the front rank, especially as these substances are accessible to farmers in many localities where nitrate of soda, sulphate of ammonia and similar nitrogen compounds are either not readily obtainable or too costly in consequence of exorbitant transportation charges. I admit that the nitrogen in cotton-seed meal is not as readily available as that of nitrate of soda or sulphate of ammonia, but it is in such a shape that we can make good use of it. Besides this element, cotton-seed meal also contains a small percentage each of potash and phosphoric acid. An average of a number of analyses concedes to it 6.8-10 per cent nitrogen, 1.35-100 per cent phosphoric acid, and 1.2-10 per cent potash. Its nitrogen is rated by the stations at 15 cents per pound. One hundred pounds of cotton-seed meal has the following fertilizing value; namely:

6.8-10 lbs. nitrogen at 15 cents.....\$1.02
1.35-100 lbs. phosphoric acid at 6 cents..... .08
1.2-10 lbs. potash at 5 cents..... .06

Total.....\$1.16

And one ton of it is worth, at the least calculation, \$23.20. Probably we could afford to buy and use it at \$28 to \$30 per ton, fully as well as to buy and use a commercial fertilizer at manufacturers' prices.

Castor pomace is very similar to cotton-seed meal in composition and effect. It contains a little less nitrogen, however, and a little more potash and phosphoric acid. Its value per 100 pounds is about as follows:

5.6-10 pounds nitrogen at 15 cents.....\$.84
2 pounds phosphoric acid at 6 cents..... .12
1.4-10 pounds potash at 5 cents..... .07

Total per 100 pounds.....\$1.03

or \$20.60 per ton. We could well afford to give \$25 per ton for it. Linseed meal contains the three plant foods in about the same proportion as castor pomace, and its schedule value does not vary much from \$20.

Agricultural papers and their staff of writers have a curious habit. When asked by their readers (as frequently happens) about the fertilizing value of oil meal, bran, etc., the answers usually and truthfully state that such materials are excellent fertilizers, and frequently can be

obtained much cheaper, proportionately, than regular manufactured (chemical) manures. The advice, however, is invariably added, to use them as food for cattle or other stock first, and (what is left after having passed through the stock) for plant food next. Animals assimilate about 20 per cent of plant foods in the meal, and pass 80 per cent into the manure pile. If the meal was bought at a reasonable price, the 20 per cent transformed in animal flesh and bone would pay more than the cost of the whole, and the 80 per cent increase the value sufficiently to pay the cost of the whole a second time. This may be good logic, but I take it for granted that any farmer progressive enough to seek information about the cheapest available sources of plant food, with the intention of drawing on them, is also intelligent enough to feed his stock properly. He already gives them all that is good for them, and that he is satisfied will keep them in best possible condition for his purposes. He crowds his fattening stock all that he dares to. What more can he do? To stuff horses, cattle and sheep above what is best for them, merely for the sake of making the manure richer, would be the height of folly. In short, the inquirer and recipient of this questionable advice was in search of plant food, not for food for his stock. Whether it is advisable for him to apply cotton-seed meal, linseed meal, bran, etc., directly to his soil or not, depends wholly on the price at which these goods can be purchased.

If my soil needs nitrogen, or the manure at my disposal does not contain as much of that element as I think would be desirable for my purposes, and I can buy nitrogen in the form of cotton-seed meal cheaper than in other forms (say at \$20 or little more per ton), I would not hesitate a minute to apply it directly to the soil broadcast, or to compost it with the barnyard manure. Or, if my land needs phosphoric acid, and I can buy it cheaper in the form of wheat bran than in any other (say at \$12 to \$14 per ton), why in the name of common sense should I refuse to apply it? The price alone must decide this question.

People who ask questions of this character usually have in view the immediate use of the articles they inquire about for fertilizing purposes. They cannot be expected to procure a lot of stock to which the meal and bran, etc., might be fed, and to go all through this slow process, and then have for their pains a lot of raw manure which in turn has to be composted, etc. Life is too short for all this. We will take the plant foods wherever we can get them the cheapest, and apply them for immediate use if we can.

OTHER SOURCES OF NITROGEN.—Dried blood is another important nitrogenous fertilizer. It often has as high as 11 per cent nitrogen, and this is valued at 19 cents per pound. Besides this it also has a few per cent of phosphoric acid, and altogether its valuation comes very near to \$40 per ton. We can well afford to pay this and perhaps a little more for it. It is a very effective and quick-acting manure.

Horse and other hoof shavings and waste, are exceedingly rich in nitrogen, but this is in a less soluble or available condition, and, I think, rated pretty high even at eight cents per pound, which is the figure at which it is quoted in the schedule of trade values of fertilizing materials adopted by the stations for 1889. The material contains from 14 to 15 per cent nitrogen, and 1 or 2 per cent phosphoric acid. We can afford to pay about \$25 per ton for it; perhaps a little more.

Wool waste from woolen mills varies greatly in its percentage of nitrogen, some samples having as high as 15 or 16, while others have only 6 or 7. It is a valuable fertilizer, and as such perhaps worth \$20 per ton.

Dried flesh, with 12 per cent nitrogen and 2 per cent phosphoric acid, is even more valuable than dried blood, and \$50 is not too much to pay for it. Dry, ground fish, containing 8 to 9 per cent nitrogen and 7 to 8 phosphoric acid, should be valued at about \$40 per ton.

A position is a good thing to have. A position as stenographer is secured by Chaffee's Phonographic Institute, of Oswego, N. Y., to all pupils when competent. Particulars free.

A TROUBLESOME WEED.

Mr. A. R. Birdsill, Colorado, sends us a sprig of alfalfa covered with a delicate vine bearing a profusion of white flowers, accompanied with a note as follows: "Please tell me what the enclosed vine is. We found one little bunch of it growing in our alfalfa of last year's sowing. Is it had to spread? Will it hurt stock to eat it?"

The plant referred to is a species of dodder (cuscuta), and belongs to the natural order convolvulaceæ. It is a parasitic plant and is only nourished by its terrestrial roots until it becomes established upon the host plant, after which its connection with the earth is broken, and it feeds upon the juices of the host plant. That the readers of FARM AND FIRESIDE may get an intelligent idea of the plant and its flowers, we have made a drawing



FIG. 1.—Dodder vine and flowers upon alfalfa.
Fig. 2.—A. Head of flowers—natural size. B. An individual flower. C. Two-celled capsule. D. Seed. E. Section of vine, showing scale-like appendages.

of the sprig received (Fig. 1), and also a detailed sketch of the flower and its parts (Fig. 2). The vine is very slender, almost thread-like, and the minute flowers (Fig. 2, B) are produced in heads of a dozen or more along the vine, as represented at A, Fig. 2. Fig. 1 represents over 100 heads of flowers, about half of which are indicated, the others being in the rear and not shown. If each of these heads contained twelve flowers, which is a modest estimate, the spray would number 1,200 flowers. At C, Fig. 2, is shown a capsule with two styles. Each flower has a capsule, and each capsule bears from two to four perfect seeds. It is evident, therefore, that in the branch represented there would have been produced from 2,400 to 4,800 vital seeds. As these are hardy, and germinate readily, it is hardly necessary to answer more explicitly the question, "Is it bad to spread?" If one little spray will produce so many seeds, what number would a plant or a patch of plants produce? The seeds (D) are of good size, and often escape the fan and sieve in preparing clover seeds for market, and it is possible the plant in question was sown with the alfalfa. Destroy it. Do not let it ripen its seeds. The plant will not injure cattle, but would be of little benefit as feed. G. W. PARK.

A NATIONAL SHEEP GROWERS' ASSOCIATION.

We have had a National Wool Growers' Association in the United States since 1862. It has done good work, and been managed by our best and ablest sheep and wool men. It has been just what its name implies, a wool growers' association. The directing and securing of legislative enactments for the protection of the wool industry against foreign competition has been the life of the association. It has done valuable services, and merits the respect which it has and will receive from all American flockmasters. Nor is its work finished, by any means. There have come changes in trade and agriculture that are making more varied and positive demands in our sheep husbandry. It is the history of English sheep husbandry repeating itself in this country.

Less than two hundred years ago England was a wool-growing country. With the increase of population came the demand for more food, which gave an impetus to agriculture. Better systems were sought for and larger crops were

raised. New forage plants were introduced, and with the introduction of the turnip, the means of furnishing a continual food supply for domestic animals was well and cheaply supplied.

About the middle of the last century Mr. Bakewell undertook the task of improving sheep, or, if we are correctly informed, continued the improvement already begun. These improvements were possible with the improvement of agriculture and the better food supply. England's improved sheep husbandry meant the substituting of mutton for wool and placing wool as third on the list of excellence.

We are approaching this same state of affairs very rapidly. The demand for mutton is quite generally recognized in this country. With this must come intelligence on the subject. There is a need of special information on recognized and unrecognized lines affecting the breeding, feeding and general management of sheep best suited to certain known and unknown conditions affecting sheep and their products.

It may be said that these facts can be gotten from the associations having the care of the different registers. This is expecting too much of them. Each breed is jealous of the other. Jealousy can never educate our agriculturists up to the importance of the subject. It is a blind leader of the blind, and both shall fall into the ditch unless more conservative, liberal intelligence shall prevail among our people. We each have our sheep hobby, and are sure ours is the best one for all to follow, without any regard to circumstances, surroundings or purposes. Each man fully believes his particular breed will answer all purposes for which sheep are kept, whether on rich soil or on poor soil; where liberal food supply is continuous, or where grass is scarce and drouths are prevalent.

The advantages and disadvantages of breed for purposes; the advantages and disadvantages of soils, climates, nearness to transportation facilities; the fitness of men to the diversified systems of husbandry, are little appreciated by us now. Selfishness, ignorance and bigotry have always impeded the course of progress and improvement. So in sheep raising. A generous discussion and comparison of views and results has done valuable service to the wool-sheep husbandry of this country, limited though it has been. So will a liberal, open discussion of subjects belonging to the more recent departures, which we believe to be an improved sheep husbandry, destined to find the greatest good for all, without regard to breeds, varieties or former notions and theories.

So long as breeders of the different varieties of Merinoes, or the various sorts of downs or long wools, meet under their various organizations and discuss questions pertaining to their special interest, so long will true progress be delayed. These meetings are good, but too narrow views are taken of the situation. To one not inside of the ring it is all confusing. It is like the political parties—each is right, and all others are rascals, thieves and robbers. These meetings of sheepmen, politicians and churchmen are so stereotyped, that, with change of names and dates, the records of one would last for years. Their resolutions, always passed with great unanimity and enthusiasm, are without change for years. A motion towards reform raises a storm of indignation at once. The reform will recognize diversified systems of sheep raising, and approve of our wool husbandry in its proper place. So of all the other varieties and systems. ***

WOOD ASHES AS A FERTILIZER.

Those of the readers of FARM AND FIRESIDE who have attentively followed me through the series of agricultural chemistry, will in some place or other have found every point anticipated and covered which my friend, Theo. F. Longenecker, brings out in the issue of November 1st concerning the value and effect of wood ashes.

The reason why the gardeners near Dayton see so little effect of wood ashes is easily explained, and I have repeatedly and emphatically called attention to just

such cases. The annual heavy dressings of stable manure have resulted in an accumulation of immense quantities of the mineral elements of plant food—potash and phosphoric acid—and since the soil already contains more than the crops can possibly utilize, further additions to it by applications of wood ashes must necessarily remain ineffective. The soil is also extremely porous, and not in need of the mechanical effects of wood ashes. The fertilizer that would give to these gardeners astonishing results, and at the least expense, too, is nitrate of soda. Look up the earlier numbers of FARM AND FIRESIDE for the details concerning this matter.

A similar case is that of the clay soil, which undoubtedly has all the mineral elements it needs for the production of the crops, and only needs additional nitrogen and perhaps carbon. I should not wonder if swamp muck, perhaps with a little nitrate of soda, would give as good results as stable manure. The plat tests suggested by me some months ago will tell pretty plainly in what element or elements of plant food the soil is deficient, and which should be supplied. Of course it would be folly to apply anything to the land which it already has in abundance, and money thrown away to put wood ashes, even at \$5 a ton, upon land abounding in the mineral elements of plant food. Feed each field according to its particular wants.

JOSEPH.

BUTTER TESTS AND THEIR RESULTS.

I believe I duly appreciate the value of simple and easy methods of testing the quality of milk and cream, but I do not draw from them such sweeping conclusions as some do.

Prof. G. E. Patrick, of the Iowa Agricultural Experiment Station, has discovered a method of testing milk by dissolving its solids, other than fat, in a mixture of acetic acid, oil of vitriol, and chlorhydric acid, and forthwith we are told this will create a revolution in dairying.

When Prof. Short announced his method of securing the fat in milk by saponifying it and then separating the compound with ether, there was a revolution in dairying just ahead! And so it has been all along the line of discovery.

But no matter how simple and effective the tests may be made, the average dairyman of the country will continue to plod along at the same old gait. He has had a little light thrown across his path, but if he does not change his course, what good has it done him? He knows his cows give poor milk, but the knowledge does not give him better cows nor change the quality of the milk of those which he has on his hands. If his knowledge leads to no improvement; if his faith does not show itself in better works, of what practical use to him or anybody else are either? The fact, and not the method of getting at it, is the real thing of value, provided it is made available. We have for many years had means for determining the quality of milk. A simpler and cheaper method of analysis is so far a gain in getting at facts, but it does not change them, nor make people give more heed to them. It only makes them easier to find out. Methods may change, and facts become so common that people cease to pay attention to them, but human nature remains the same. Men are indifferent and lazy, not to say stupid. They make changes only when they are obliged to. Conservatism is their natural element, and as they have got along pretty well so far, they conclude to let things run. The old cows will do; the old methods have answered in the past and it seems hardly worth while to change now or in the future. It is too much trouble, and looks as if it would disarrange things.

Well, this *dulce far niente*—this sweet doing nothing—has its advantages as well as its excuse. No change can be made without some cost. The dairyman already has his outfit, such as it is, and he would not feel like sacrificing it, or any portion of it. To throw it away is like parting with an old friend. Life is uncertain, and the general run of things in this world is by no means sure. He can get along as he is this year, and next—who can say what a year will bring forth? Ready money is not always at hand, and getting in debt is an unsafe business. The cows are not very good, but if killed or sold,

where are better to be had? It will take more money to buy better cows, if they can be found. So the exchange would not be an even one. It might be a profitable one if proper selections are made. Aye, there's the rub. The best cows are not so plenty as blackberries, and they are usually "picked" before you get them. To pay more for a new lot and then find them no better than the old lot, or perhaps not as good, would be an unsatisfactory thing to contemplate. So the old cows remain on the farm, undisturbed.

"But improve your herd; buy a blooded bull and breed up." "Y-a-s," says one; "I once had a Jersey cow in my herd to color the butter, and she was the poorest critter I ever had in my dairy. No Jerseys for me." It was literally true. He bought a miserable, cheap, scrub of a Jersey for a few dollars, and she was not worth her keep for six months. You could never, after that, make that man believe that a Jersey cow is good for anything. Let him go out to buy a blooded bull, and he would pick the cheapest, poorest stick he could find, probably a half-breed, at that. Result, a failure, of course. What can you do with or for such men? Yet the country—and the woods, too—is full of them. What can be done to improve the poor farmers of the country—poor in purse and poor in intellectual acquirements? The good ones will take care of themselves; the others simply drift. They are flood-wood in the tide of progress.

No, Mr. Editor, revolutions are not caused by trifles. They do not come suddenly in industrial or social affairs. They depend on something more than the quality of milk or any method of testing it. We have got to put a new light into every brain and a new impulse into every heart. This is the sort of work which the *Bulletin* is doing. It is scattering seeds, some of which will spring up and grow, though many perish—mixing in a little leaven here and a little there, which will have its influence in helping to raise the whole batch. A wide-awake few will go ahead, old laggards will die and new men will take their places; intelligent breeders will continue to breed better stock about as fast as sluggish humanity will feel a demand for it, each generation will start out on a higher plane, and the world will note progress, not a sudden revolution—at least in dairying and raising improved dairy breeds. Some invention for testing the quality of dairymen, so that every one can see himself as others see him, is a desideratum. What inventor will immortalize himself? Such an invention would do more than any milk test to bring on a revolution in dairying.—T. D. Curtis, in *Jersey Bulletin*.

SHEEP REARING RESUMING ITS PROPER PLACE.

These who have so persistently insisted, during the past few years, that there was "a lion in the way" of the sheep husbandman, can find food for profitable reflection in the general interest manifested in the show-rings at a majority of the important fairs of the present season; while the number and character of the animals shown, the sales effected, the prices obtained, and the general satisfactory outlook may portend an eclipse to the reputation for prophetic foresight of the few men who mistook depression for destruction, none are likely to be found unwilling to see and hail with satisfaction the improved prospects for profitable returns for intelligent flock management.

Some of the great fairs have had greater numbers of sheep in the pens in past years, but it is quite as certain that none of them have ever had better animals. This fact was especially apparent in the classes for medium and long-wool breeds, and only less so in the fine-wool class as regards numbers of animals on view—a disparity readily accounted for by recent increased attention to the production of meat in connection with the growth of profitable fleeces. All of which is satisfactory. Not by any means that every phase of the situation among sheep owners is all that could be desired, but because there seems fair sailing ahead for every one of them who is unembarrassed by other considerations than the breeding and management of good sheep; and it seems reasonable to assume that in view

of recent experiences and the recent pleadings of the *Gazette* and other friendly advisers, no flock owner will continue in the race with other than good animals. The men with inferior animals are self-handicapped. Those who are without the best animals of their favorite type are not likely to find a more favorable time than the present for securing them. Prices for really meritorious sheep are now low—as low as they ever will be—lower than they really should be in justice to the men who persisted in improving their flocks "through evil as well as through good report."

Those who cannot realize that the time for mourning over the condition of our sheep husbandry is past, and that the day and opportunity for profitable flock management has come, had as well stand aside. They are likely to be run over by the procession of live and determined men who propose to secure success by deserving it—who set about adjusting their business to the newer dispensation while others were waiting for the resurrection of a dead past.—*Breeders' Gazette*.

MILK RATION FOR LARGE COWS.

An Iowa correspondent asks Prof. Stewart, through the *Country Gentleman*, the following:

"I desire to know the most profitable ration for cows, using any or all of the following feeds: Bran, \$9 per ton; corn, 30 cents per 70 pounds; oats, 20 cents per 32 pounds; timothy hay, \$5 per ton; middlings, \$12 per ton; oil meal, \$25 per ton. My idea is to feed as much as possible of hay, corn and oats. You claim an advantage by feeding ground feed on cut hay—just how much? Quote your experiments as proof."

The professor replies as follows:

"Expressing the wish to feed as much hay, corn and oats as you can properly, I should advise to grind 64 pounds of oats with 74 pounds of corn in the ear. Let it be ground fine. I have figured the average composition of this mixture, and if you feed the best clover hay, you might feed this composition largely, but with timothy less can be fed, because both are low in albuminoids. The following will be a good ration for large milk-yielding cows:

	Albumi- noids. lbs.	Carbohy- drates. lbs.	Fat. lbs.
18 lbs. timothy hay.....	0.94	7.81	0.25
8 lbs. oats, corn, cob.....	0.63	4.02	0.35
6 lbs. roller bran.....	0.66	2.64	0.16
3 lbs. linseed meal.....	0.83	1.01	0.09
Total.....	3.06	15.48	0.85

"This ration has a nutritive ratio of 1 to 5.7, and although a large ration, it costs only a very small fraction over 15 cents. Good milkers will yield 40 to 50 pounds of milk per day on this ration, and keep in good, healthy condition beside.

"I have seen Holstein-Friesian cows so heavy and yielding 60 or more pounds of milk per day, that they required a larger ration than this, but such cows can be fed extra from the same mixture. If the ration requires to be larger, add two or three pounds to the bran. The hay is to be cut and moistened and the ground feed mixed with it. If this ration were to be fed, the ground feed and hay separately, it would be quite inadequate to the purpose intended. The health of the cow requires that the concentrated food shall be mixed with the coarse fodder, so that the whole may be raised and remasticated and have the full benefit of the saliva, and so that when it reaches the fourth or true digesting stomach, the whole mass shall be so porous that the gastric juice can saturate the whole at once and digestion will proceed evenly.

"The experiment referred to above showed that when meal was fed alone, it passed through the stomach partially undigested, and that this undigested portion tinged the droppings, plainly to be seen with the naked eye; and when examined with a moderate magnifier, it was plainly discovered all through the droppings. But when the meal was mixed with moistened cut hay, at the end of a week no meal was found in the droppings. We found at the end of three weeks, the increase in the yield of milk to be over 20 per cent. But the increase in the yield of milk would depend upon how long the cow had been yielding milk. Let us suppose that a herd of milk cows is fed hay and grain sep-

arately for several years; their digestive capacity would be impaired and it would require more food to produce the same result each succeeding year. The effect of feeding grain alone to cattle is certainly very familiar to western men, and yet it is certain that one half of the corn allowed to a steer per day (one half bushel), if ground and mixed with the fodder, would produce a large average gain.

"Dairying is done on two slender a margin to permit of waste in feeding. But our correspondent's cost of ration is so low as to give him a great advantage, for the cost of sending his dairy products to market is but a very small fraction of saving in the cost of the ration."

RULES OF BREEDING.

1. Only the possession of superior merit or the ability to produce offspring forming such merit, gives an animal or a breed a claim to the title "improved stock."
2. The personal qualities of the animal to be used in breeding are more important than those of their ancestors; the qualities of parents more important than grandparents, and vastly more important than those of any more remote ancestors. The offspring resembles the parent much more frequently than it does some more remote ancestor.
3. Pedigree is important; the test of its value is the merit of the animals forming it. The top crosses are more important than more remote ones.
4. Continued selection is essential to improvement or maintaining a high degree of excellence. No breed, no family, has uniform excellence in all its members.
5. Food, care and training are as important as pedigree in developing or maintaining excellence.
6. Remarkable development in any one quality is often accompanied by comparative or actual weakness in other directions, but it is easily possible to secure a good degree of excellence in several directions.
7. It is often wise to breed for more than one purpose. The largest number of horses, cattle and sheep owners do not want animals fitted for only one use.
8. The greatest good to the greatest number of farmers is secured by encouraging the large increase in number and general dissemination of improved stock and moderate prices. Intelligence and good judgment among breeders should be relied on to keep up the standard of merit rather than the restrictive regulations as to registration, importation of stock, etc.
9. It is wise to encourage the use of good cross-bred sires if pure bred ones cannot or will not be purchased.
10. For the great mass of farmers, the cheapest, safest and best method of improving their stock is the continued use of good sires on the best females obtainable, but the present low prices of pure-bred stock makes it an especially good time in which to lay the foundation for a full-bred flock or herd.
11. The multiplication of unimportant points required in pure-bred animals is an evil, as in all other attempts to increase or diminish the reputation of animals of any breed or family on any other points than that of actual merit.

The above rules were prepared by Prof. Morrow and sent to the Improved Stock Breeders' Association of Iowa, at its meeting at Newton in 1887. We call special attention to rule 5 as one of the rules that is most frequently overlooked, and yet of the utmost importance.—*Farmer's Review*.

VETERINARY SURGEONS.

Our veterinarians are doing a good work and are highly appreciated by the fine stock breeders who want scientific skill and intelligence when a valuable animal is sick. It is heartrending to see the old quack cow doctors torturing a sick cow, boring their horns and pouring turpentine in, or splitting their tails, and other inhuman work, and the ignorant, loud-mouthed "hoss" doctors as cruel as they are ignorant of practical veterinary treatment. Several instances have recently come under our observation that makes us shudder that a civilized people would tolerate such cruelty. The state legislatures should prevent it, and require veterinary practitioners to have some certificate of qualification as is required in the medical profession.—*Western Agriculturist*.

S. K. COBURN, Mgr., Charlie Scott, writes: "I find Hall's Catarrh Cure a valuable remedy." Druggists sell it, 75 cents.

Our Farm.

GARDEN GOSSIP.

BY JOSEPH.

CATCHING THE MOLE.—It is a sad tale which one of my friends has just been telling me—the tale of a cold-frame well filled, only a few days ago, with fine plants of choice cabbage varieties for spring planting, now utterly ruined by the pesky mole. Not a plant left! "What shall I do to get rid of the pest?" asks my friend in despair, and with blood in his eye.

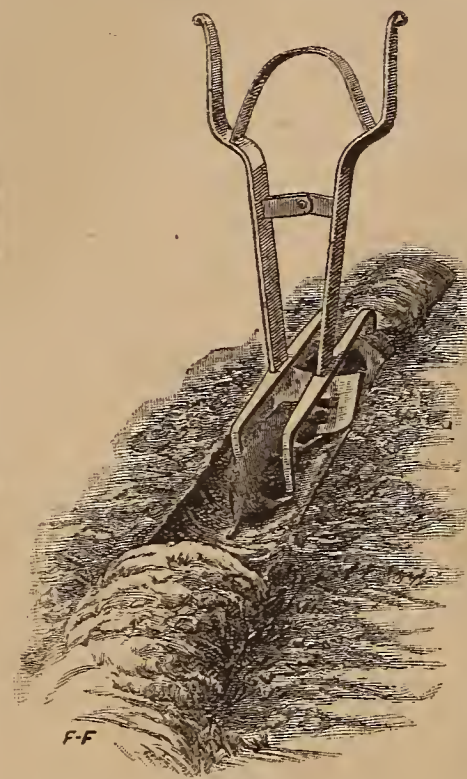
In the first place, I would select a site for the cold-frame somewhat farther removed from a creek or the edge of a low land meadow than was my friend's. Moles don't usually work in gravelly or clayey upland, such as the inquirer had at his disposal for the purpose. Furthermore, I would board up a hot-bed tightly, clear from the bottom of the excavation up, and fix cold-frames in a similar way, thus guarding, in a measure, against the intrusion of moles, rats and mice. But if these quadrupeds get into the beds after all, I know of no other way of getting them out than to catch them or to poison them. Of the two ways I always prefer the former. Poisoning, with me, is only the very last resort.

In all localities where moles abound (which is not the case in my friend's place), and in larger towns generally, the hardware stores keep good, serviceable mole-traps on sale, although I am not posted concerning the price usually asked for them. By taking a little time, and with some patience and perseverance in setting the trap or traps, the offenders can be got rid of, and their numbers in rich garden soils, lawns or meadows, wherever they abound, at least greatly reduced.

As a rule, I do not admire garden implements and small devices generally that come from foreign countries. They are mostly clumsy affairs, adapted to clumsy methods and to conditions where time and labor are of little consequence. In the mole-trap shown in the annexed illustrations I think we have an exceptional instance. It seems to be a model of simplicity, and altogether a serviceable device. It comes from Germany, but whether patented or not, I am not informed. Any blacksmith would be able to make one after the picture, all the materials needed being some band iron and a piece of spring steel. If manufactured in a wholesale way, cast iron being substituted for wrought iron, the original cost might be reduced so that the trap could be sold in retail for fifteen cents apiece at a profit to the manufacturer and dealer. The retailers in Germany sell the trap for about eleven cents apiece, or \$1 per dozen. At that rate every farmer could afford to have a trap or two, while seventy-five cents

run from the top, then insert the trap thus set lengthwise of the run, so that the trigger, which is cut out in the middle, forms a kind of obstruction to the passage of the animal, and cover the run up again with pieces of sod or slate. The mole comes along, runs against the obstructing trigger, thus unwittingly releasing the jaws and giving the spring, D, a chance to exert its power. All at once the unfortunate animal finds himself in a tight squeeze, and in the iron grip of death. It makes no difference, either, from which side he comes; he meets the same fate.

KAFFIR CORN.—One of the subscribers of FARM AND FIRESIDE speaks very enthusiastically of Kaffir corn. There can be no doubt that it is a good thing for southern sections, where the seasons are long enough to mature the immense bunches of seed, not only on the main stocks, but also on the laterals. The seed, whole, is a fine thing for poultry, and ground,



MOLE-TRAP.—SPRUNG.

probably for almost all other stock, and the flour perhaps for pancakes, etc. But here in western New York the plant is too late—by far too late—to be of value. Both for seed and fodder, common corn will give us far better results than Kaffir corn. The same experiment I made last year in New Jersey, and I do not think I shall plant the Kaffir again, unless I can do so south of Mason and Dixon's.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

CHERRY TREES FOR SHADE.

It has been repeatedly urged that fruit trees should be set out on various parts of the farm, but this plan has not been followed for various reasons. Many people who plant trees for shade for stock, plant those which bear no fruit, although they make excellent shade. We think it would be much better to combine the two good qualities and so benefit both man and beast.

Some varieties of cherry trees are hardy, grow to good size and bear excellent fruit. This fruit does not fall off, will not injure stock, and is generally marketable. The trees grow fast and generally live to a good age. They afford excellent shelter from the sun, their foliage being very dense. Of course, not all kinds of cherry trees have these good qualities, but the same is true of any other class of trees. It costs little more to raise these than forest trees, the only difference being in the original cost; this will be repaid in the fruit.

SOLAR PIT.

Many nurserymen are using this method for insuring the rooting of their grape cuttings, but it is also applicable to all cuttings. The plan followed varies in the method adopted, but not in principle. The intention is to place the cuttings in such a position that they will have their tops cool and the bottom end warm. In green-houses, for years this principle has been followed, and almost every glass structure has some provision made to accomplish this purpose. It is generally done by boxing in the pipes under the bench and then keeping the greenhouse cool. By

this means growth of the tops is retarded, and the plant grows at the root.

Some nurserymen, in the spring, take their bundles of grape cuttings, turn them with the butts upwards, cover them with about three inches of soil, and then pile on hot horse manure, spent hops or other heating material for two feet or more, and allow the cuttings to be thus buried until they have "calloused," when they are planted out. Another plan, which depends entirely upon the direct heat of the sun, is to set the bundles of cuttings in a box, or frame, with butts up, cover with three inches of soil, and then put on the sash and allow them to stay on during the sunshine. By this means the same purpose is accomplished as with the manure. They should be left in this position until calloused. These two methods are advocated by different nurserymen.

A NEW METHOD OF GRAFTING.

I enclose a sketch of the way in which Mr. John Cretors, of Leavenworth, Kansas, grafts the grape very successfully, commencing not earlier than June 22, on stocks half to three quarters of an inch in diameter. A slit is cut upwards and a similar one downwards in the stock at any convenient height above the ground, and the graft is cut with a bow-like bend, which keeps it tightly in place. The grafts are tied with rubber bands a quarter to three eighths of an inch wide, pretty tightly, or they are wrapped tightly with tin-foil cut in strips half an inch wide, rubbed down closely as the wrapping proceeds, then over the foil they are wrapped tightly with soft cotton wrapping yarn: then the stock between the ends of the graft is tied tightly with hard cord.—C. W. K., in Rural New Yorker.

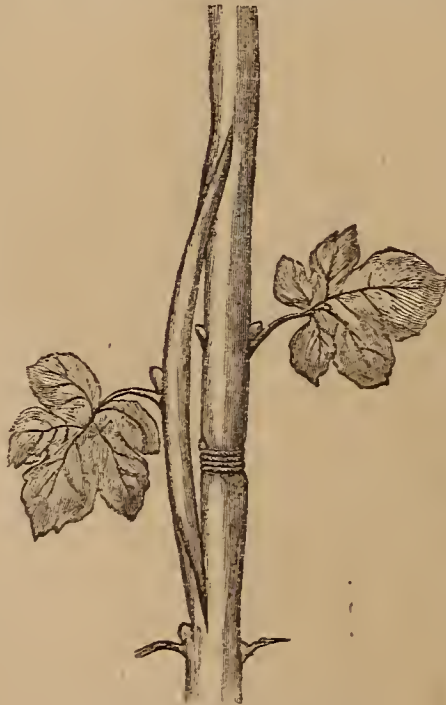
INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Pear Tree Cuttings.—W. W. W., Mt. Sterling, Ky. Make cuttings in the fall, of good, strong wood of this season's growth. Make them eight inches long. Carefully heel them in moist soil until spring. In the spring plant seven inches deep on good, rich garden soil after it is well settled. If they get dry, water them. They do not need shade.

Apple Trees Not Bearing.—M. L., Morse Bluff. I cannot say to a certainty the cause of the continued unfruitfulness of your orchard, but it is probably due to the variety of trees more than anything else. It is well known that some varieties have a tendency to bear sooner than others. For instance, the Letofsky apple fruits when quite young, while the Baldwin requires more time before it bears, and the Northern Spy does not bear until quite an old tree. If your trees are of a good variety, let them continue to grow thriftily and develop. When they do fruit, they will yield all the better for it.

Apple-Root Plant-Louse.—J. M. C.—The apple-root plant-louse is especially injurious



A NEW METHOD OF GRAFTING.

to young apple trees, and every planter should see that the roots of his trees are free from this pest before planting them out. Frequently, when no cause can be ascribed for the death or dwarfishness of an apple tree, it is the result of the work of this pest. Since it works in the ground and out of sight, its ravages are unheeded, but it is nevertheless very harmful in many localities. In appearance, the insects look like a white, powdery material on the roots, and are thickest in the crevices of the abnormal swellings which they cause. They are very small, of a yellowish white color, and are covered with a waxy matter which re-

sembles mould, the filaments of which are five times as long as the insects themselves. They live by sucking the juices of the plants, for which purpose they are provided with a proboscis. They are sometimes seen on young sprouts above ground. If a tree is dwarfed and no other cause is known for it, the presence of this pest should be suspected; and if the roots have warty swellings on them, no time should be lost in applying the remedy.

REMEDY.—Scalding water has been used most successfully. If the trees are to remain in the soil, the roots may be laid bare and the water applied at nearly the boiling point without injury; but where the trees are taken up for transplanting and are to be dipped in hot water, the temperature should not exceed 150° nor fall below 120° Fahr. A mulch on the surface around the trees has the effect of bringing the insects near the surface, where they may be more readily destroyed.

Oyster-Shell Bark-Louse.—B. H., Colesville, Md., writes: "I have a fine apple orchard three years old. The trees are thrifty and of rapid growth. I discovered a specking on some of the trees in August, and it has now spread to nearly every tree in the orchard. The specks are about the size of a pin-head, of a dirty white color, and very flat. They stick tight to the tree, about half an inch apart, and all over the wood. They appear to contain an insect, but I have not been able to open one without destroying the contents, which has a reddish color when mashed. Some of the twigs have died, which appears to be the only injury thus far done."

REPLY.—The insect of which you complain is the oyster-shell bark-louse. Its habits are as follows: Under each of the scales on the trees will be found a mass of eggs varying from fifteen to a hundred or more. They are white in the winter, but change to a yellowish color towards spring. In the latter part of May, or first of June, the young insects hatch out, and very shortly commence to move over the tree. They have the power of movement for a few days only, and then become fixed in place and cannot move, but insert their sharp beaks in the bark and live on the juices of the tree. The louse secretes a scale covering for itself, and continues to grow. By the middle of August the round of life is completed, and the mature insect is only a scale filled with eggs.

REMEDY.—Kerosene emulsion is a sure remedy, if carefully and persistently applied. It is best to apply it before spring. Dr. Lurger recommends, before applying the kerosene emulsion, after the leaves have fallen, that the trees be sprayed twice, at intervals of a few days, with a strong solution of soft soap. This will aid much in loosening the scales and preparing them for the effective use of kerosene emulsion. The emulsion should be made according to the Hubbard formula, which I have several times given in these columns—namely, one gallon of kerosene, two gallons of soft water and one half pound of soap. Have the water warm, and first dissolve the soap in it, and then add the kerosene and churn them together by forcing them through a force pump. For use, add nine times as much soft water as you have emulsion, and spray the trees with it. Do not syringe the trees, but get one of the improved nozzles and spray them. By using the spray, the emulsion will go further and do much better work than if syringed on. After the emulsion is made, it will have a thick, creamy appearance, if properly prepared, and will not leave a greasy mark when put upon glass.

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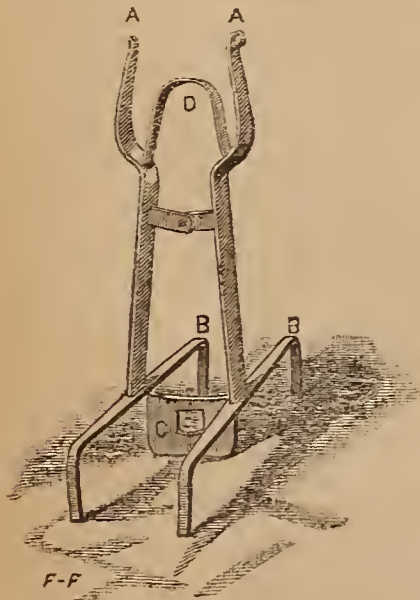
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MOLE-TRAP.—SET.

or \$1 each (which I suppose is about what a mole-trap sells for at our stores) makes its use in many instances prohibitory.

The construction of these mole-squeezers is made plain by the illustration, and I need only add that the trap is set by pressing the handles, A A, of the "mole tongues" together, thus opening the jaws, B B B, and inserting the trigger, C, in position, thereby keeping the jaws apart. Carefully open a little piece of the mole-

EXTRACTS
FROM CORRESPONDENCE.

FROM NORTH CAROLINA.—The people of Gates county are clever and sociable. A great part of the county is well adapted to fruit, such as apples, peaches, pears, grapes, strawberries, etc. It is the home of the Irish and the sweet potato. We raise from 50 to 400 bushels of sweet potatoes to the acre. What we need is more grass and more stock. I think lucerne would do well here.

Gatesville, N. C.

B. B. L.

FROM KENTUCKY.—I do not think we have the best country in the world, but we have a very good country. We can raise all kinds of fruit and vegetables. We have an abundance of fine timber—oak, hickory, walnut and poplar. Fruit has done very well here. We have no good markets, Louisville being our nearest. We raise tobacco for our main money crop. It is so very low in price now that it hardly pays to ship it to market. The corn crop was very good this year, but the wheat crop was very light.

Randolph Ky.

W. I. W.

FROM ILLINOIS.—Wheat made an average of about 23 bushels per acre; oats, rather light; corn, 50 bushels per acre, and our apple crop has been simply immense. Some of our farmers are getting rich on the profits of their apple orchards. One man had an orchard of twelve acres and he sold the crop for \$2,250, the purchasers to pick and barrel the apples and he to haul them away. Some of these counties will realize this year \$250,000 for their apple crop. This is the fruit country of the United States. Land is advancing rapidly, and will soon be worth as much as land in the northern part of the state. Good farms can be bought now in this (Edwards) county for from \$20 to \$30 per acre.

Albion, Ill.

E. C.

FROM DORCHESTER COUNTY, MARYLAND.—We are bounded on the north by the great Choptank river, which varies in width from one to three miles; on the east by the Delaware, on the south by the Nanticoke river, in width from half a mile to two miles, and on the west by the Chesapeake bay. Besides, our county is cut up more or less with navigable streams and inlets. We have one railroad and another under construction; so you see we are well supplied with the means to carry our produce to market. Cambridge, a town of 4,000, is our county seat. Our soil in the eastern part varies from sand to a clay loam, while in the lower part, next the bay, it is heavy clay. It rarely gets warmer than 80° above or colder than 3° above zero. We plant corn from April 12 to 25. Strawberries are ripe May 15. We cut wheat by the middle of June, and have new potatoes and green peas by June 1st, and ripe peaches July 4th. Our first frost is about October 10, while the first killing frost seldom comes before October 20. We have good schools, plenty of churches, fine roads, no saloons, and some farms for sale, which, with a delightful climate and pure water, God-fearing men and lovely women, what more can one ask?

Hurlock, Md.

C. L. N.

FROM ARKANSAS.—I do not agree with D. B. W., in November 1st FARM AND FIRESIDE, about Grand Prairie, Arkansas. He says farmers cannot make paying crops of corn, cotton, wheat and oats without the draining. I have seen as fine oats raised on Grand Prairie as ever were raised in Illinois. Cotton makes one bale per acre on the prairie; excellent corn can be made, also. As for drainage, the land is very easily drained, and is just as easily cultivated. The prairie is covered with a fine growth of prairie grass, which makes fine pasturage. This prairie is well adapted to stock raising and farming. Peas, beans, corn and melons do well on the prairie soil, with no other cultivation than planting the seed between the furrows and covering with the harrow. All kinds of vegetables and fruits do well, such as pears, apples, peaches, plums, grapes, quinces, strawberries, raspberries, etc. Apples, if properly taken care of, will keep from the time of ripening until the next spring. One farmer came to this prairie, twelve years ago, with only two teams of horses and money enough to buy one or two cows. He rented a farm and went to work, and he now owns one of the best farms on Grand Prairie, a large herd of cattle and other stock. All this he made on this Grand Prairie, besides making a living for a large family.

Carlisle, Ark.

M. E. B.

FROM SOUTH FLORIDA.—I have been living in South Florida for the past two years, and think I know something about the climate, soil, etc. L. C. W., Fort Myers, Fla., in October 15th issue, speaking of the climate, says it varies from 70° to 85°, rarely up to 90° in summer, and in winter rarely down to 40° above zero. Since I have been in Florida I have seen the hottest weather I ever saw, the mercury ranging from 90° to 105° in the shade, and hot at night, too, and in winter, down to 20°, and frequent frosts. In speaking of rain, he says we may expect rain every two weeks from the time the rainy season is over (which ends about the last of September) until next June.

We expect a great many things in this world that we don't get. Since I have been here I have seen a drouth every fall and spring. Last spring we had one that lasted for nine weeks, with high wind almost every day. He speaks about hogs and cattle raising themselves. I must say they look as though they cared for themselves, especially the razor-back hog. Vegetation grows very slow here, especially in winter, and is likely to be killed with frost. Strawberries do well, but they take a great deal of attention. The soil is very poor, and has to be fertilized. Vegetables do right well in early spring, such as onions, radishes, lettuce and different varieties of melons. Likely, the soil at Fort Myers is better than any I have seen yet. I would not advise a man with a family to come to Florida to live without a good amount of capital and plenty of good, stout help in his family; otherwise, he will have a hard time getting along. There is a great deal of hard work to be done, and it costs more to live here than it does at the North. I know this all by experience; if I did not I would not write it. It is claimed to be a healthy country. Last spring nearly every family in this community was afflicted with chills and fever, and this part of Florida is said to be the healthiest part of the state. I would rather be where there is less such sickness.

Pasadena, Fla.

R. B. P.

SOUTHERN OREGON.—I have often had a place in these columns, telling of the attractions of Rogue river valley. A friend suggests that I now tell of its drawbacks. This country, like all others, has failings. First of all, land is too high in price for men having less than \$2,000 to invest. From letters received I find that most of those who inquire are of this class. Don't come. Then, at least three fourths of this county (Jackson) is made up of land unfit for cultivation. It is fit only for pasture three months in the year. In the hills the range is better. Among pests, we have some bad birds which levy a heavy tax on the orchardist. A shot-gun is a good remedy for this pest. The digger squirrels, skunks, moles and gophers are bad. The first is very easy to manage with poisoned wheat. Some farmers allow them to go free, and thus the country is kept well stocked. The others are very hard to manage, and very little is done to destroy them. We are midway between Portland and San Francisco. The only railroad to these points is operated by the Southern Pacific Company. This means that transportation is taxed to the utmost limit. The company may be doing the best it can; it cost millions to build the road, but we are groaning under the rates imposed. A few men in this great corporation have become immensely rich. It looks to the farmer as if something is wrong. Our county is heavily in debt, though this is common to many other places, and our tax rate is 2 per cent on the assessment, which represents a 50 per cent valuation. Our roads are very poor, and as long as the fossilized system of "working (resting) out your tax" obtains they will not greatly improve. Our schools in the country are often very poor institutions of learning. Too frequently they are made the bone of contention for hostile factions in the district. Many of them, however, are fairly well managed. We need more people who believe that the school is the highest institution of civilization (except the church). We cordially invite such people. Just now, cheap school-houses, miserable furniture, entire lack of libraries and other necessities are too common. These are our drawbacks, and my friend is right when he insists upon having them set alongside our incomparable climate, our water, our timber, our fruits, our fish and game, and our grand scenery. You will have less to contend with here in raising crops than in many other places. You will have splendid health if you use a little judgment in selecting a location. Fuel is cheap. Stock of all kinds is free from disease. The winters are mild, and our fruits are fine, and free, comparatively, from insect pests. On good land you can raise nearly everything you need, except when you have a year like 1889; then you will raise very little. Go to the foothills and get a place that can be or is irrigated. Too many come here to live in or near town. That is all right if you are well-to-do; if not, keep away, for they are now full of poor men. Besides, each one of our towns is fighting every other town in the valley. Somebody will get hurt at it by and by. I will, too, if I go on telling the truth. I am trying to help the intending immigrant. We have no drawbacks, or few, at least, that cannot be remedied. Come along and help us.

Spikenard, Oregon.

S. M.

FROM PRINCE GEORGE'S COUNTY, MARYLAND.—Something is being said all the time, on both sides of the question, whether the old slave sections of the Union offer desirable homes for northern farmers who would prefer to live in a milder climate, especially when lands can be bought for a title of what they cost in the North. It is quite possible that political prejudices, remoteness from railroads, enervating temperature, malaria, poor soil, the labor question, the race problem, in some sections outweigh the mild climate and cheap land. Each locality must set forth its own advantages and reply to the objections that are urged against it, in order to induce immigration.

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A LEGACY.

Friend of many years!
When the great silence falls at last on me,
Let me not leave to pain and sadden thee
A memory of tears.

But pleasant thoughts alone
Of one who was thy friendship's honored guest,
And drank the wine of consolation pressed
From sorrows of thine own.

I leave with thee a sense
Of hands upheld and trials rendered less—
The unselfish joy which is to helpfulness
Its own great recompense;

The knowledge that from thine,
As from the garments of the master, stole
Calmness and strength, the virtue which makes whole
And heals without a sign;

Yea, more, the assurance strong
That love, which falls of perfect utterance here,
Lives on to fill the heavy atmosphere
With its immortal song.

—John G. Whittier.

A CHILD OF NATURE.

BY JEANNETTE H. WALWORTH.

Author of "Southern Silhouettes," "True to Herself," "The Silent Witness," "A Strange Pilgrimage," Etc., Etc.

CHAPTER VII.

THE BAL MASQUE.



FROM the tutor's point of view, things were rapidly going from bad to worse at the Upham's. He had returned, on the Monday succeeding that dismal Friday when it had been stormy without and within, chiefly bent upon obliterating all unpleasant recollections. His first glance at Una's face showed him that the clouds had deepened, not lifted. After a short

time, spent in scanning some of the finest lives in Paradise Lost, he closed the book with a thump and said reproachfully:

"Miss Upham's mind must have soared to loftier realms than Milton's, or he could not have failed so entirely in gaining her attention."

Una lifted her heavy eyes to his face. The lids were red and swollen with weeping. "No, my mind has not been soaring, it has been groveling. It cannot reach your height nor his, to-day."

"My dear child, you are not sick?"

Her lip quivered, but she answered indifferently: "No, not sick; only too lazy to take in anything you were reading."

"You were at the theater Friday night?"

"Yes."

"And doubtless you are going somewhere to-night?"

Una laughed mirthlessly.

"Yes, I am going to the bal masque to-night. To tell you the shocking truth, I was thinking of my costume while you were reading Milton. I don't believe I really care much about going to-night, but mamma wishes it so very much."

"And you?"

"Oh, I suppose in a lesser degree I wish it too." She did not tell him that she was rushing from excitement to excitement in search of oblivion.

"Miss Upham, you are breaking yourself down."

"Do I look broken down, you unflattering monster?"

"You look to-day as I have never seen you look."

"And I feel to-day as I have never felt." She leaned back in her chair, and closed her eyes. The hot tears were very near their lids, but she forced them back.

"God bless her," the shabby tutor said to himself; "so far she has marked the line between gaiety and levity with sharp distinction, but can she hold out?" Suddenly he repeated the impudence for which Mrs. Upham had rebuked him so severely:

"My pupil, I wish you would promise me not to go to this bal masque to-night. I assure you it is not the place for you. It is given by a lot of fast, club men, and only the people inclined as they are, will be there."

"But I believe I want to go. Study is growing tiresome—unless I loved it for its own sake, which, you know, I forewarned you, I did not."

"For somebody else's sake, then," he said, pleadingly. She sat up and looked at him with blazing eyes and dilating nostrils: "Hush, there is no somebody for whom it is worth while exerting one's self. Somebody is a fraud. Everybody is a fraud. Nothing gilds back once more."

"Your cynicism is the cynicism of a tired child," he answered, smiling indulgently, "it is what it seems." Then her head dropped languidly from physical exhaustion.

"From new-born knowledge of men, rather. You must not call me 'child' any more, Mr.

Capers, I have put away all my childish fancies and—things—I believe I am going to give up study. It is nothing but weariness."

"I should have expected the memory of a promise to abide long with you," said the tutor, coldly.

She snapped her white fingers vigorously: "That for a promise given in childish ignorance, broken in enlightenment. I hate Fenton Cooper."

"Fenton Cooper!" The name had never before passed her lips in his presence. "I know him very well. Have known him all my life. He's a commercial traveler. Was he your—inspiration?"

"He is a fraud!" said Una, fiercely.

"I don't think the man lives who would dare hint as much to his face," said her tutor, each word falling slowly from his lips.

"The woman does! I would! If Fenton Cooper were to stand before me at this moment, I would say to him, Fenton Cooper, you have lied!"

The tutor's hands went nervously to his blue spectacles. He was very white. The color had even deserted his beardless lips. There was a profound silence in the study for a minute. He could hear the short, quick breathing of the excited girl opposite him, and the rustling of the papers which she was restlessly shoveling here and there on the table between them. Slowly his hand dropped heavily once more upon the book before him. The test was not yet complete. Presently he spoke again:

"Am I to understand, Miss Upham, that I am dismissed?"

She looked across the table at him with pitying eyes. She would like to say "yes." But he looked so very poor and needy. His straight, gray hair lay smoothly over his forehead, touching the blue-veined temples. His eyes, seen through the round, blue glasses, looked large and hollow. Who knew how many little, half-starved children he had been feeding on the money he got for teaching her? And, after all, she had enjoyed studying, even when Fenton Cooper had faded momentarily out of consideration, and poor old Capers had been so faithful! He offered no plea for himself. He awaited her decision in cold, proud silence. She gave it with sweet contrition in her voice: "No, you are not dismissed, Mr. Capers. Come back to-morrow. But, really, to-day I couldn't possibly get my mind off my costume for the bal masque. Don't despise me, please."

"You are positively going, then?"

"I am positively going. So please consider yourself dismissed for the day."

As Una, flushed with the delightful sense of mystery and romance, attendant always upon a mask ball, was adjusting her pink domino to her entire satisfaction, that night, one of the attendants in the ladies' dressing-room put a crumpled bit of paper in her hand:

"You are to read it at once, miss."

Una opened the piece of paper, wondering. There were in it but two short lines, written with a lead pencil: "If you do not care to be mixed up in a disgraceful scandal, have nothing to do with King Midas to-night. Above all things, do not accept his escort to the supper-room."

Una, passing this over to her mother, said in a low, angry whisper, so as not to be heard by the other masqueraders who were buzzing about the dressing-room:

"It is another sample of Mr. Capers' officiousness. He tried, this morning, to get me to say I would not come, and now he proposes spoiling my evening. Mr. Heywood is to be King Midas. I coaxed him to tell me last night. It is intolerable—that note—"

"I shall dismiss Mr. Capers to-morrow," said Mrs. Upham, as she angrily tore the note into small bits and turned to lead the way toward the ball-room.

As Una entered the ball-room, she glanced about her nervously. Strange that she should permit that scrawl to so affect her, but she almost hoped something would occur to keep Leonard Heywood away from her. But, there was no such good fortune in store for her.

There, conspicuously in front of her, stood King Midas, resplendent in purple and gold, his purple silk domino hiding all of his face but his gleaming eyes. He towered an inch or two over the masqueraders who formed a group about him. Una was glad he did not hurry to her, as she had very much feared he would. His head was turned in her direction, but he

made no movement to join her. As she and her mother were crossing the large room under convoy of an usher, a low voice at her elbow caused her to start and turn suddenly. There was King Midas, resplendent in purple and gold, bending before her, as he besought the honor of the first dance. Una glanced from the purple silk domino beside her to the group at the other end of the room. King Midas was still a conspicuous figure in it.

"Why?"

"Yes! There are two of us. The mystification is not of my choosing. But there is no regulation against duplicates on these occasions."

"But how am I to know them?" said the sorely perplexed Una. "You know I never attended a masquerade ball before."

"How are you to know what?"

"Which is the real King Midas—I mean—which one I am—"

"To honor with this sweet hand? That is something which must be left to your own heart's gentle instincts, beautiful Una."

"I have no heart instincts in the matter," she crisply said, "and I find it all very mystifying. You must not let me make any very awful mistakes. You may have the first dance. Oh, I am afraid I shall not enjoy it at all."

"I will not permit you to make any very awful mistakes." Then he glided away from her and was lost in the crowd, which was growing denser every moment.

"That one was Mr. Heywood," she said to her mother, in tones of positive conviction. "I know him by the way he carries himself, and by his eyes. I cannot be deceived. His voice, too."

"Then, who is this one coming?"

Mrs. Upham's question was asked in a hurried undertone. Una turned her head quickly. King Midas was standing before her with his tablets extended.



UNA'S ESCORT LIFTED HIS PURPLE SILK MASK.

"May I not put Queen Titania down for a first dance?"

"I have already given my first dance, sire!"

"But you promised it to me three days ago," came petulantly from behind the purple domino.

"Mr. Heywood!"

"Yes! How could you maltreat me so? I gave you the secret of my costume, so that I might be sure of you."

"But I thought I did give you the dance, not five minutes ago! Why should there be two of you, to complete my mystification?"

His voice was full of suppressed passion. "I think it has been done to annoy me," he said, turning his head angrily in the direction of his duplicate, "and I wish I could find out who that masquerader is."

"We all unmask when we go into supper, do we not?"

"Yes, and let me engage to be your escort then, before my double can possibly rob me of that pleasure."

Una hesitated. That haunting note had especially warned her against going into the supper-room with him for escort.

"Perhaps you are wondering how you are to distinguish between the two of us," he said, taking swift note of her hesitation.

"No—I was—mamma—I guess we will go home before supper, won't we?"

"Supper is the principal inducement to me," said Mrs. Upham, candidly, and King Midas, without any further parley, assured them that he would be on hand at the right moment to take them thither.

It was a novel experience to Una, and she was soon swept along upon the tide of merry-making, which is seen at its fullest, and perhaps freest, in the unconventionally of a masked ball. Toward midnight she sat, flushed and tired, by her mother's side, too weary to keep any more of the many engagements which her tablets reminded her of, and

conscious of a creeping sense of dissatisfaction with herself and her surroundings.

"Mamma," she said, "I believe Mr. Capers was right. I wish I had not come. The women are loud, and the men coarse. Let us go home, please, without supper. I would rather."

But it was too late. King Midas was even then standing before them. "I believe the procession is forming for the banquet room. Permit me."

Una's hand was well within his arm when an angry voice said, close in her ear, "You are promised to me for the supper-room, Miss Upham. I cannot permit this interference."

Una's escort moved resolutely forward, drawing her trembling little hand more firmly within his arm. She turned her head towards Leonard Heywood, with a nervous little laugh: "Take mamma. It is not my fault if I could not distinguish between you."

There was nothing else for him to do, but in the delay incident in freeing Mrs. Upham's long train from the leg of her chair, Una and her escort became separated from them and were borne far in advance by the throng of laughing, jostling maskers. There was something almost stern in the grave silence of the tall masquerader who held Una's hand firmly on his arm, while he kept his position in line against all encroachments.

As each couple neared the door of the banqueting-room, an official, gayly appareled, challenged the wearers of the masks. Disguises were cast aside and names revealed. Beside the challenger stood two soberly uniformed men in the city's livery. They looked curiously out of place in that gay throng.

"What are they doing here?" Una whispered in her tall escort's ear.

He answered with a sort of scornful indignation in his voice: "Observing order, presumably. Disagreeable things have been known to happen at these halls of the Old Gold Club."

Una clung to him in undefined terror. "I wish I had taken my tutor's advice and stayed away. He was right."

"As you did not take it, however, I beg of you—"

But just then the men in blue stepped in front of the challenging officer and addressed him in a low voice: "Sorry to spoil your fun, but you are wanted. You need not unmask, just come with us to the cloak-room."

Their hands were upon his arms. It was all the work of a minute. Without the quiver of a muscle or the utterance of a word, Una's escort lifted his purple silk domino and revealed the straight, gray hair and smooth face of—Frank Capers. The officers of justice stepped back, bewildered and apologetic. Never, in after years, in obedience to her most resolute efforts, could Una Upham recall the next few moments of that hour without a sense of confusion and disgust. She remembered the hurrying of feet; a sharp exclamation in her mother's familiar voice; an audible oath—the sickening sight of a gay masquerader passing her, between the two blue-coated men. Then—in the carriage in which her mother and she were rolling rapidly homeward, while opposite them, sternly silent, sat her tutor in his every-day garb. Only once she had spoken to him.

"It was you, then, who wrote me that line of warning!"

"No; I sent you no warning. That arrest was as much of a surprise to me as to you."

CHAPTER VIII.

A STRANGE ADVENTURE.



WHEN Una came downstairs the next morning, long after the family breakfast hour, she found her father and mother excitedly discussing a paragraph they had just happened upon in the morning's paper. Mrs. Upham waved the paper at her daughter triumphantly:

"There, read that."

Una put out her hands deprecatingly. "Don't; oh, please don't. If it is anything about last night, I don't care to hear it discussed. It was all too horrible, too perfectly disgusting."

"I think Una will soon get enough of this sort of society, mother," said Mr. Upham, in hopeful tones. "It's none of my doings, wife, this dragging her around from post to pillar. The child looks done up."

"Una has a position in society to sustain," said Mrs. Upham, loftily.

"But, listen, Una. It seems it was all a mistake. I know I could not have been so blinded by a rowdy. I flatter myself I do know a gentleman when I see one. Read it again, Mr. Upham."

Mr. Upham read it again:

"The members of the Old Gold Club indignantly deny that the man who was arrested by the authorities at the bal masque given by them last night, was Mr. Leonard Heywood, one of the club's oldest and most highly esteemed members. The offender was a stran-

ger, who managed to effect an entrance by duplicating Mr. Heywood's costume, and confused the door-keeper by this means. Mr. Heywood is positively known to have passed into the supper-room a few moments prior to the arrest, as escort to the beautiful Miss U—, of this city."

"Miss U—, of this city." Mrs. Upham repented, softly, as she leaned over and possessed herself of the paper. That paragraph was destined to be clipped and pasted in her scrap-book among "Notable Events."

"Thine settles it," she said; "and I am very glad. So you see, Una, Mr. Heywood did take you in to supper, after all, and the impostor fell to my share."

"Mr. Heywood did not take me in to supper. I—" said Una, sharply; then she stopped, and by an imperious wave of her hand swept the subject into the realms of silence. "Mamma, I am going to take a walk, a long walk, after I have eaten something. I may be gone hours."

"I will go with you, dearie," said Mr. Upham, eagerly. "I'm pining for a tramp."

Time hung very heavy on the old man's hands. He scarcely ever knew what to do with the empty hours. Mrs. Upham never encouraged his attendance at ball or theater. "You get sleepy so ridiculously early, Mr. Upham," was her reproach, "and one really feels compelled to fetch you home and put you to bed." He had not been able to rebut this argument successfully, so he had gotten into the habit of staying at home and keeping the fire up in the back parlor, over which he would nod and snore spasmodically, until Una and his wife would come back to him and give him a sort of second-hand entertainment. It was not often that Una cared to take walks these days; that was the reason he greeted her proposal so eagerly. The very suggestion stirred his rural pulses.

"I'm going to walk very far and very fast, popsy." Una came over to his chair, and putting her arms caressingly about his neck, laid her soft, smooth cheek close to his stubby chin. "I'm so tired of gaslight and tight dresses and stupid people. I want to spend a whole day out under the skies, somewhere."

"Sky seems to be at a discount here in town, boney. We might go out to the park and hunt some up. I believe it would feel real good to sit in the sunshine and bask like two green lizards 'all day long.'"

Una laughed, but Mrs. Upham frowned ominously. "If you have a mind to turn lizard and lay in a stock of rheumatism, I have no objections in the world, Mr. Upham. Nor if Una, whose complexion I just am getting into decent order, has a mind to take a short, brisk walk, with Bab for attendant, I shall not object. But, as for you two wandering all over creation like two babes in the woods, or sitting 'round in the parks like two homeless tramps, I won't hear of it. Have you forgotten, Mr. Upham, that the plumbers are coming this morning, and that you have to show them what has to be done?"

Mr. Upham had not forgotten, but he hoped she had. It appeared to him that existence was resolving itself for him into a fierce struggle with plumbers, water men, gas men and other necessary evils incident upon an uncomfortably advanced style of civilization.

"I guess you'll have to take Bab, honey," he said, meekly. "You and I'll try it some other time. I forgot about the plumbers."

So she took Bab, and Bab being allowed to suggest the route, suggested it without a moment's hesitation. "If you won't think it too far, I'd like to walk towards Tompkins Square, miss. My sister lives on the square, and she was sick last Sunday. If you wouldn't mind sitting down in the park to rest when we get there, while I run in to see her?"

It was an admirable suggestion. "Just the thing," Una informed the maid. The walk could not possibly be too long. If it was, they could take the cars and ride back.

So they proceeded briskly until the square, with its sparse, struggling greenery, was reached.

"There ain't nothing stylish 'bout this part of town," said Bab, when they finally entered the broad, open space, whose asphalt walks teemed with the sordid life of the East Side. "But you can see all sorts from them benches, of summer evenings, when the band plays and the folks swarms out of all their houses. If you won't mind I'll go now, miss. I won't be gone ten minutes. You look tired out—that you do, miss."

"Go, and stay as long as you please, Bab. Did you ever see so many children all at once? I think it will give me an hour's entertainment just to watch them."

"Don't take none of them in your lap, miss. There's no knowing what you might catch," Bab turned back to say.

Una laughed and turned away from her maid to make her own selection of a bench. There were very few of them entirely unoccupied. Idlers, smoking evil-smelling pipes. Loafers, raving over dirty newspapers. Small, weakened girls, in weary attendance upon smaller and more weakened infants. Tots, with round, staring eyes, gazing at her from under coarse, red woolen fezzes, no end of young children who were enjoying life after the fashion of all young animals; they were all there, but she did not feel tempted to any closer contact with any of them. She found a bench, presently not exactly unoccupied, but so sparsely so that she felt at liberty to appropriate the other end. A boy, not less than seven years old, sat on one end of the bench, gravely looking on at the sports of the other children. With one arm he enfolded the fat waist of a younger child who had fallen asleep with her head on his shoulder. On the bench by his side was an open, pasteboard box, in which Una could see slices of buttered bread and some pieces of cold meat, laid precisely.

As she seated herself on the other end of the iron bench, the boy turned and looked at her with grave, unchildlike inspection. He was a handsome boy. At least nature meant him to be, but some one or something had marred nature's design. The little legs that were swinging to and fro under the bench, were thin and weak. There were black circles about his large eyes, and a hard, drawn look about his baby mouth.

"Why don't you go play with the other boys?" Una asked, answering his grave look of inspection with a pitying smile.

"Gran'ma said I wasn't to leave Lucy's side." He looked down protectively upon the fat child, whose weight pressed heavily against the shoulder which he bent accommodately to his burden.

"Is that Lucy?"

"Yes'm."

"What if I was to watch her while you took some exercise?"

"You couldn't; she'd cry if I was to budge. Lucy cries awful when she gets started. That's the reason gran'ma sent me out here with her. Her crying hurts mamma's head. Mamma is sick. She got hurt."

Una's quick sympathies were not once aroused. Chance had brought her close to one of those countless nodes of sickness and misery with which this great human hive swarms. Perhaps Providence had directed her steps that morning, so that she might be convicted of selfishness and uselessness, when the means were hers to scatter comfort and blessing. What were her petty troubles, after all? "Where do your gran'ma and your sick mamma live?" she asked, turning to the boy, who was cautiously trying to wriggle into an easier position without disturbing his sleeping burden.

"Over yonder-wny. You see that brick house 'cross the square, with the lamp-post right in front of it?"

"Yes."

"Well, we live right there. In the back rooms, upstairs. Gran'ma come with us when we come from the country, and she lives with us."

"What did you come from the country for?" "I don't know 'm. I wish't we hadn't." There were tears in the boy's large eyes. They trickled slowly down his patient, yellow cheeks and dropped on Lucy's tumbled hair. He had no hand at liberty to check their progress. Una leaned over and wiped his tears away with her own handkerchief.

The child smiled at her as she returned the delicate bit of cambric to her silk bag. "It smells just like the violets used to smell at home," he said, with pleased surprise.

"I wonder if your gran'ma would scold me if I went over there to see your sick mamma?" Una asked.

"No'm: I guess she'd be glad. Gran'ma cries about mamma all the time."

This pathetic admission put Una's lingering hesitation to flight. She got up from the bench and walked with swift directness towards the shabby brick house, before which stood the lamp-post.



"HE HAS COME, MAGGIE! HE HAS COME! THANK GOD, IT IS NOT TOO LATE!"

"I want to see the sick woman upstairs," she said, when the janitress, issuing from some subterranean recess, asked her who she wanted.

"Two flights, back. She's mos' gone, too, I should say."

The janitress disappeared and Una, gathering her dainty skirts close about her trim ankles, toiled upward, making as little noise as possible with her high boot-heels on the bare floors. It was not exactly a welcoming face which met hers as the door upon which she tapped was slowly opened. It was a dark face, seamed and lined with care—furrowed now by tears that had plowed their course over it. This must be the gran'ma who cried "about mamma all the time," Una concluded.

"Did you want to see me, miss?" she asked, stepping out into the corridor and drawing the door behind her.

Una scarcely knew how to proceed. This was no mendicant standing before her. And what had she to offer but cold charity? "Oh, I beg your pardon," she said, stammeringly, "but I have been sitting over yonder in the park, waiting for my maid, who had gone to see her sister, and I got to talking to such a bright little boy, and when he told me his mamma was sick and his grandmother was unhappy about her, I thought, maybe, you wouldn't think it intrusive if I came up to see you. I'm so very sorry for you both. I wish I could help you."

"Thank you. No, I don't think it intrusive. May be you can help me 'rouse her. I should like to keep her alive until she'd made her statement. They're a long time coming. Step inside, please."

She stood aside for the young lady to precede her into the room. Una's own preference would have been for instant flight, but she had invited this insight into the squalid misery of the city's life, and she would not shrink from it with ready cowardice. But there was no squalid misery inside that door. There was an absence of luxury and elegance, but there was neatness and comfort. The room had the close atmosphere of a badly ventilated sick-room, and there was abundant evidence on all sides that the motionless form on the bed had been the one object of consideration for many weary days. The woman who admitted her led Una directly up to the bedside, when she indicated the chair she had herself just vacated. Then she said, with a sort of weary impatience in her voice:

"I would be obliged to you if you would try

to rouse her. She is so used to my voice, it's lost effect. I want to keep her alive a little longer. Maggie, Maggie, don't go yet. They'll surely come soon. Don't go yet, daughter."

"Have you tried singing to her?" Una whispered, softly.

"Singing!" There was bitter mockery in the mother's voice. "No; we haven't sung much of late. We used to sing together, Maggie and I, when we lived in the country. That was before she was married, though. We've both of us done more crying than singing, since."

"She was not happy, then," said Una, leaning over and looking pitifully down upon the still, white face on the pillows. "She must have been so pretty. How long her lashes are, and what lovely hair."

"She was beautiful. Beautiful and as blithe as a bird in mating time before he came. Look at that!"

The woman bent over and lifted a napkin which was laid about the sick woman's neck. The smooth, white flesh was dark and discolored. "And at that," she went on grimly, lifting the masses of shining brown hair, and parting it with her thin, trembling fingers until she brought to view an ugly plaster patch it had hidden. Una recoiled in shuddering horror.

"She has been hurt!"

"Yes; she has been hurt! Hurt, body and soul." She brought a glass with a little brandy in it, and tried to force the pallid lips open with a spoon. "Maggie, my precious one, don't go yet, please don't go yet. Take this, it will keep your strength." The tears were raining down her furrowed cheeks, and down Una's sweet face, when she set the glass back on the table and resumed her place on the side of the bed.

"If it would comfort you to tell me about it—perhaps—I might think of some way to help you. Father might, you know."

"The law will give me all the comfort mortal man can. I had him arrested last night. They are going to bring him here for her to identify him and make her statement. I don't want her to go before he comes."

Una was trembling violently. Into what new shame had she heedlessly penetrated! She cast about her for some mode of egress other than the door by which she had last entered. But she could not go just yet; the woman was giving her child's pitiful story in quick, dry sentences.

"You see, he fooled us. Fooled us both. We were doing very well in the country, Mag-

gie and me. I had a farm up in the Orange hills. He came there as a summer boarder. I did not blame Maggie for falling in love with him. I believe I sort of helped things on, but you can't ever tell whether you are making or ruining your daughter when you help her to get married. It was not until after Lucy was born, and he kept coming down to the city and staying longer each time, that Maggie and I concluded to break up in the country and come, too. You see, she loved him straight along. It did not take me long to find out what was the matter. He had fallen in love with a fine city lady—and he was no earthly use to anybody but her. She made a fool of him. One night my girl there, thinking there must be something at the bottom of that other woman's heart which would make her feel the pain that was consuming her own, went to the house where she knew he was visiting. He came to the door himself. That is the way they brought my girl home. Such a gentle, sweet child as she was! Oh, God, curse him! Curse him for me, I do beseech thee!" Her hands were lifted imploringly. "I can't do it hard enough." A feeble sigh fluttered over the dying woman's lips. A putcher ungloved hand on the mother's knees.

"Let us pray for her and him. Do not curse him in the awful presence of the angel of death."

"I can't pray. I have forgotten how to pray. Sing to her. She used to like 'Rock of Ages.' We used to sing the babies to sleep with it."

In a voice tremulous with tears, Una Upham, kneeling by the side of the bed, sang the sweet old hymn through unflatteringly. The dying girl slowly opened her eyes and let them rest upon the lovely face so close to her. The harsh noises from the street floated in to them. The thundering of a heavy beer-wagon drowned the sound of heavy, approaching footsteps. Una still knelt, with her warm hands clasped over the clammy ones Maggie had folded across her breast. Slowly the girl's steadfast gaze passed over Una's head to the door beyond. It had opened! The mother sprang eagerly from her post by her dying child.

"He has come, Maggie! He has come! Thank God, it is not too late."

Una, rising to her feet, turned her face to the door. There, standing dumbly between two officers of the law, his head drooping, until the long, silky moustache swept his coat collar, stood—Leonard Heywood.

[To be continued.]

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GRATEFUL-COMFORTING. EPPS'S COCOA BREAKFAST.

"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—Civil Service Gazette.

Made simply with boiling water or milk. Sold only in half-pint tins, by grocers, labelled thus: JAMES EPPS & CO., Homoeopathic Chemists, London, England.

MASON & HAMLIN

The Cabinet Organ was introduced in its present form by Mason & Hamlin in 1831. Other makers followed in the manufacture of these instruments, but the Mason & Hamlin Organs have always maintained their supremacy as the best in the world.

Mason & Hamlin offer, as demonstration of the unequalled excellence of their organs, the fact that at all of the great World's Exhibitions, since and including that of Paris, 1867, in competition with best makers, of all countries, they have invariably taken the highest honors. Illustrated \$22 to \$900 catalogues free.

Mason & Hamlin do not hesitate to make the extraordinary claim for their Pianos, that they are superior to all others. They recognize the high excellence achieved by other leading makers in the art of piano building, but still claim superiority. This they attribute solely to the remarkable improvement introduced by them in the year 1862, and now known as the "MASON & HAMLIN PIANO STRINGING," by which the tone of the instrument is secured the greatest possible refinement of tone, together with greatly increased capacity GRAND & UPRIGHT, for standing in tune and other important advantages.

A circular, containing testimonials from three hundred purchasers, musicians, and tuners, sent together with descriptive catalogue, to any applicant. Pianos and Organs sold for cash or easy payment; also rented.

MASON & HAMLIN ORGAN AND PIANO CO. BOSTON. NEW YORK. CHICAGO.

If afflicted with sore eyes use Dr. Thompson's Eye-Water

Our Household.

WILLIE'S PRAYER.

"Dear Santa Claus," prayed little Will, in words truly shocking. "I've been a good boy, so please fill a heapin' up this stocking. I want a drum to make pa sick, and drive my mamma crazy, I want a doggie I can kick, so he will not get lazy. I want a powder gun to shoot right at my sister Annie, and a big trumpet I can toot just awful loud at granny. I want a duffle big false face to scare in fits our baby. I want a pony I can race round the parlor maybe. I want a little hatchet, too, so I can do some chopping upon our grand piano new when mamma goes a shopping. I want a nice hard rubber ball to smash all into flinders the great big mirror in the hall, and lots and lots of winders. And candy that'll make me sick so ma all night will hold me and make pa get the doctor quick and never try to scold me. And, Santa Claus, if pa says I am naughty, it's a story. Just say if he whips me I'll die and go to kingdom glory." —H. C. Dodge.

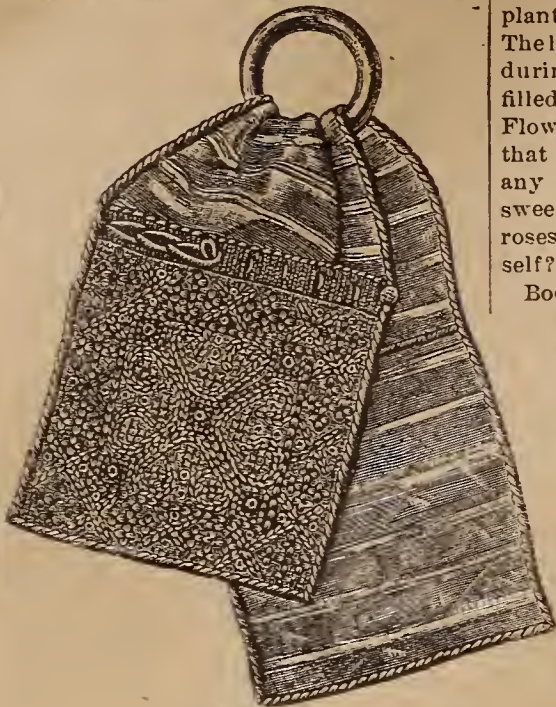
CHRISTMAS TIME.

"And so the year rolls by."

Everything has its time and season; and here we are again back to the time the children love so, and look forward to so eagerly. Already I have heard some say, "I'll buy that and lay it away for Nannie's Christmas present." By taking advantage of cheap sales many nice things can be provided by a little forethought, which, if left till Christmas time is upon us, you will pay much more for. I know one mother who has everything ready now that she expects to give—and a busier woman I never knew, and yet she always seems to have plenty of time for her children. While there are others with twice the leisure she has that will be hurried till Christmas eve, and then say, "What a bore it is to get ready for Christmas."

All through the summer, marvels of beauty have been fashioned by busy fingers. For "throws" for mantels, a very pretty fashion is introduced of cut work of chamois skin applied to China silk; also, cut work of one color of plush ap-

the year's calendar printed on it in clear figures, nicely arranged, and the year in fancy figures at the top. These she sold at fifty cents; at seventy-five cents a yard, she made a profit of thirty cents, out of which she paid the printer. These calendars the ladies who bought them mounted



SCHOOL-BAG.

to suit their own taste. Some put a band of velvet at the top and bottom of the satin, a layer of cotton at the back and lined them; then hung them from a brass rod with rings and finished the bottom edge with pompons. Some were just turned over a layer of cotton and the corners fastened to a sheet of heavy, water-color paper with brads; into the brads were tied bows of narrow ribbon, which concealed them. The edge of the paper was cut with a pinking iron. Across the upper left-hand corner was the word "Xmas," painted heavily in gold. It was hung by a cord.

A SIMPLE LAMP-SHADE.—Since lamps play so important part in decoration of homes, ingenuity has exerted itself to provide beautiful shades for them. A very simple kind, yet one that is effective and novel, is made by covering a plain yellow porcelain shade with a deep flounce of gathered lace. Around the top is tied a half width of deep yellow surah, with a sewing-silk fringe across the ends. It is tied in a simple but generous bow-knot, which is spread out to cover one half of the shade. The same is equally pretty carried out in old rose, or cardinal red.

SCHOOL-BAG.—This is much more convenient than a strap or carrying upon the arm. Get a yard and a quarter of dark felt, line it entire, double the width together and sew the ends and up each side, leaving a half-yard length in the middle for an opening; overcast this to finish it. Put large initials on one end, and a decorative band of large, overlapping rings on the other, done in different colored silks.

SHAVING-CASE.—The back is made of heavy, water-color paper in the form of an opened book. Any little girl can decorate the back if she is careful. The paper must always be dampened with a sponge, as it receives the color better; the straight lines are best done with a pen. The back is covered with cut tissue papers. A neat cord and tassel is attached to hang it by. This will be very acceptable to father or brother.

LAUNDRY CARD.—The cover to this is painted upon celluloid, which comes in sheets twenty-five cents a square foot. It takes water colors beautifully. Around the edge is a border of wild roses. In the center a maiden sitting upon a wash-tub,

watching for her ship to come in. Any appropriate motto will do to surround it.

BAGS.—There is no end to the variety of them; but a pretty one is made of circles of cardboard covered with chamois skin, lined with satin and lined with a satin bag. This, furnished with thimble, needles, thread and scissors, would be very acceptable to a little girl.

HANDKERCHIEFS.—No one ever has too many; half a dozen of different kinds are nice, two of them silk.

A box with several necessary articles, including ribbons, gloves, a dainty bottle of perfume, are all a charm to any woman.

If you have an invalid friend, a lovely plant in bloom is the most acceptable. The large, crystal rose-bowls, used so much during the summer, are a very neat gift, filled with flowers on Christmas morning. Flower stores are so plenty now-a-days that from them orders may be given for any time. Why not buy your wife or sweetheart a couple of dollars' worth of roses, as well as a box of cigars for yourself?

BOOKMARK.—Take half a yard of handsome, white, watered ribbon, paint a spray of leaves or roses or any other flowers on one end and attach to the other end, by baby ribbon, a tiny leaf calendar; fringe both ends. This will do to lay in grandma's Bible, so she will know the day as it comes along.

CARDS.—If you can write them nicely, a pack of calling cards are a very nice gift. If you cannot write them nicely, have them printed with the script letters to simulate engraving. Playing cards come now in a dainty book form with oxydized silver backs.

CHRISTIE IRVING.

HOME TOPICS.

CODDLED APPLES.—A young lady sent the following recipe to me with her endorsement of its excellence, and I think all who try it once will be sure to repeat



SHAVING-CASE.

it often: Take sour apples—greenings are the best—and core but do not peel them; put them in a sauce-pan, with a tablespoonful of sugar to each apple and water enough to nearly cover them. When the water boils, set the pan back on the range and let them cook slowly for two or three hours, or until the water has nearly boiled away; the apples are soft and the juice almost a jelly.

BAKED APPLES.—There are baked apples and baked apples. One who has never eaten them prepared as follows has never eaten baked apples at their best: Take large, sour apples and core them from the blossom end without cutting clear through the apple. Set them in a pan and fill the hole where the core was removed with sugar, lay a little piece of butter on the sugar and sprinkle a little cinnamon over that. Pour boiling water in the pan to a depth of one half an inch and set them in a moderately hot oven. Baste them occasionally with the water in the pan and let them cook until the apples are soft. Serve cold with sugar cream for those who like. They are good enough without this addition.

WHY THE HENS DON'T LAY.—The usual plan, if plan it may be called, of managing poultry on the farm, is to let them pick up their living from the barn, stable and pig-pen and around the kitchen door. Sometimes they roost in trees, under sheds, in the stable and wherever else they choose, and occasionally they have a house of their own, but even then it is

seldom or never cleaned and is apt to admit rain, wind and snow very freely. Again, in the matter of nests, each hen makes her own choice of location, and it is not often one easily found, so that if eggs are laid they will sometimes be spoiled before they are found. Under all these circumstances we often hear people wonder why their hens do not lay, and say: "It does not pay to keep hens," or perhaps they will blame the particular



WORK-BAG.

breed of fowls which they may have; but a change gives them no better results.

I do not see how any one can go into a city market and see the prices at which eggs and chickens are sold without being convinced that poultry raising is profitable, if rightly managed. Not nearly as much depends upon the breed of fowls as upon their management. In the first place, they should have a comfortable house, wind-tight and storm-proof, with facilities for ventilation, and then it must be kept clean. Plenty of clean, fresh water should be given every day, in both summer and winter, and regular feeding. It is not a good plan to feed corn alone to laying hens, as it is too fattening; better alternate with oats and wheat screenings and bran. A warm feed in the morning, with bran and skimmed milk or sour milk through the day and grain at night, will be quite sure to keep the fowls in good condition and give a good supply of eggs during the winter, if the hens have comfortable quarters. A kettleful of little potatoes, turnips, etc., boiled once or twice a week, with bran stirred in and scraps of meat or cracklings, makes a good change.

Be sure to have the nest boxes where they may be kept clean, and if, when the eggs are gathered, any are found soiled, let them be washed as soon as they are brought in. If eggs are intended for market, they will sell much quicker and for a better price if they are clean than



OPERA-GLASS BAG.

they will when soiled. It pays to have anything that is offered for sale look as nicely as possible; besides, a soiled shell really injures the flavor of the egg. If as good care is taken of the fowls on the farm as is given to cattle, sheep and horses, they will pay proportionately as



LAUNDRY CARD.

plied to another until one could not tell which was the ground material. The pattern must be a close one, and it is couched along the edges with tinsel thread or couching silk.

Last year a lady made considerable profit on a little idea of her own. She got a quarter of a yard of satin of different colors, took it to a printing office and had

well and there will be no need to ask "why the hens don't lay."

A QUOTATION PARTY.—A favorite amusement among the young people of a certain neighborhood is "quotation parties." When the invitations are sent out, each invited guest is requested to come to the party prepared with three quotations, from standard authors, memorized. When

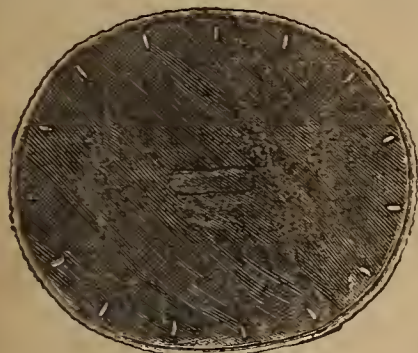


CROCHET EDGING FOR OPERA-GLASS BAG.

the guests have all arrived, a leader is chosen, who numbers the company, and then number one gives a quotation, and the one who first gives the name of the author receives a bit of bright ribbon, which is to be tied in the button-hole. Next, number two gives a quotation, and so on until each has given one, when number one gives another, and so on until all are given. At the close of the evening the one wearing the greatest number of ribbons receives a prize—some little thing which has been provided for the occasion. The leader is also referee on all disputed points. Much enjoyment and no little benefit is gained from these quotation parties. **MAIDA McL.**

OPERA-GLASS BAG.

An oval piece of strawberry-colored silk rep, from 15 to 17 inches wide each way, is required for the outside of this bag, which is lined with moss-green silk plush and drawn in at the top with narrow strings of moire ribbon the same color. A worked border three fourths of an inch wide, and an edging crocheted with gold thread ornaments, around the edge of the bag. Between the lining and stuff, exactly in the middle of the oval, is put a piece of cardboard, the shape of which

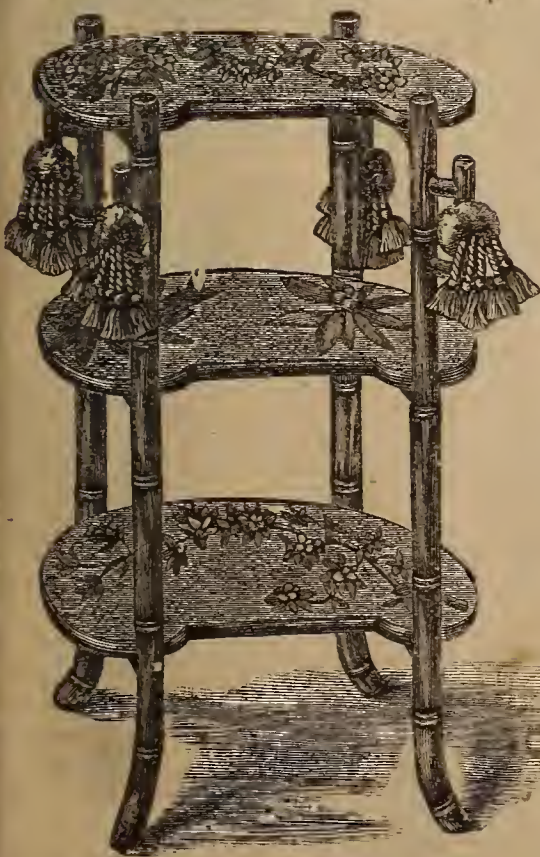


BOTTOM OF OPERA-GLASS BAG.

answers exactly to that of the larger part of the glass. For the strings, 1 yard 5 3/4 inches long, and to draw both ways, straps 1 inch long are crocheted with moss-green silk of lengths of chain.

CHRISTMAS REMEMBRANCES.

TABLE—I do not know of anything more prized as a gift than something



PAINTED TABLE.

made on purpose for one, and the handiwork of one's friend. A person handy with tools can easily make a pretty, three-shelved table, like our illustration. The uprights could be made of bamboo poles, or nicely-turned ones of wood. The

shelves, nicely planed and oiled, can be painted in any graceful pattern, then varnished when dry. The top part of the posts are decorated with cords and tassels of different colored silks.

One of the nicest things for a young girl is a furnished box. It can be a carved box, or one sawed out in patterns with a scroll saw, which will cost one dollar, and is neatly lined with color. Into this put four nice handkerchiefs, a pair of gloves, two yards of wide ribbon of a becoming color for hair ribbons, a shoe and glove buttoner, a pair of scissors and two papers of pins, and two or three small veils of different colors, and see the delight your half-grown daughter will manifest at its contents. If God has blessed you with means, and no daughter, send such boxes to some one to whom such a present would be worth more than words could express. Ah, if, in our giving, we could find some one heart



CHILDREN'S CLOAKS.

to gladden through these days when every one's heart is open, how glad the Christmas time would seem!

It always seems as if "to him that hath it shall be given" at this time. Try and think up some one that hath not.

CHILDREN'S CLOAKS.

Our illustrations are for both boy and girl.

The boy's is a simple sack coat, with two collars. The material should be of the material men use for their clothing; cassimere is a good material.

The little girl's is of cashmere, or broadcloth, the under cloak a sack, the cape accordeon plaited onto a velvet yoke. The plaited part must be four times the length wanted, and the plaits folded deep. It is done in New York by machinery, for \$1.50 per yard. The material for the cloak can be bought in some of our large city stores, but is expensive, as it comes in skirt lengths.

SMOKE PICTURES.

We do not mean those pictures seen by the dreamer's eyes as he sits at the open fireside and watches flame and smoke in their fantastic flight up the chimney, but actual pictures of permanent black and white.

They are made of smoke on a white surface. A plate is a good thing to work on. Hold it over a flame—a gas-jet or candle. If the latter, just so the wick does not touch it, for that would grease the plate, which is not wished. Wave the plate to and fro so the smoke is evenly distributed. Now make the principal lines of your sketch. A moonlight scene is well adapted to be expressed in the black and white which you have at your command. But you can choose any simple picture on which to try your 'prentice hand. Where you wish to lighten any part of your picture, rub off the smoke with your finger or a stiff brush. Where you wish to make a place darker, go over it with a soft brush. Some of the smoked tint will remain; resmoke it, and work again with the soft brush. Repeat this process; each time the brush will remove some of the smoke, but by resmoking the tint will gradually grow darker and become so permanently fixed that it will take considerable brush-

ing to remove it.

Where small points of light are necessary, remove the smoke by means of a sharp stick. The darker you make the first general tint the less you will need to resmoke your picture. For the most delicate points

of light, a needle can be used. When the picture is finished, so proud will be the amateur that he will wish to preserve his first effort, which, in spite of defects, is generally cherished more than later, more finished productions. If the picture is on a plate—and that is to be recommended, because one can be used that has a fancy edge, which, with a plain margin of white, makes sufficient frame—if, then, you have used a plate, set it on a table and pour on enough thin varnish to cover it completely. Tip the plate so that the superfluous varnish may escape. This will dry in a few minutes, after which the picture needs no glass, but can be dusted without injury.



PAINTED TOP OF TABLE.

A very pretty story is told concerning the invention of this art, which reflects credit on the heart as well as the skill of the inventor.

A German artist of celebrity having heard of a widow and children in need, repaired to the cafe where his artist friends were wont to meet, and relating the story which had so touched his sympathies, tried to have them join in contributing to help her. They were not in the philanthropic humor and refused to do so. Quietly he withdrew and remained some time, forgotten by his companions. When he returned he displayed a plate with a picture on it. You may imagine they were interested, especially as the process was to them unknown. So enthusiastic was their admiration that they began to bid for its sale in a spirited and generous way. The rivalry increased and the plate finally sold for a large sum. "Now," said the kind artist to his less-feeling brethren,

ten by his companions. When he returned he displayed a plate with a picture on it. You may imagine they were interested, especially as the process was to them unknown. So enthusiastic was their admiration that they began to bid for its sale in a spirited and generous way. The rivalry increased and the plate finally sold for a large sum. "Now," said the kind artist to his less-feeling brethren,



CHRISTMAS PRESENTS.

In the list will be found Watches, for men, ladies and boys; Gold Rings, Ladies Lace Pins, Cuff Buttons and other jewelry; a variety of Pocket Knives; a very desirable Stamping Outfit; Ties, Scarfs and other articles of Fancy Work; Albums, Work Boxes, Writing Desks, Plush Dressing Cases, Purses, Pocket-Books and Shopping Bag; Dolls, Magic Lantern, Steam Engine, Printing Press, Telescopes, Wood Carving Tools, Bracket Saw, and many Toys and Games; a handsome Decorated China Dinner and Tea Set; Spoons, Knives, Forks, etc.; Child's set of Knife, Fork and Spoon; Sewing Machines and other household and kitchen devices; an excellent Roller Organ, Violin, Accordions, Harmonicas, etc.; selections of handsome Scrap Pictures. Also a number of valuable and entertaining Books, including our Peerless Atlas of the World, the newest, latest, and cheapest Atlas published.

It will require only a few minutes of your time to make selections from our Premium List, and your order will be promptly filled, as we have purchased large stocks of the goods, and have them ready to send to our friends. Order early. Address all letters to

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.



Offer No. 2—For 25 cents will send paper one year and a GOLD HUNTING CASE, Stem Winding, Stem Setting Watch, with Lever Movement, Expansion Balance, and all modern improvements, either Elgin or Waltham make, for a list of 40 subscribers. If you want the Gold Watch send 25 cents and the names of 40 newspaper readers.

"this money is for the widow to whom you would give nothing to save her from starving, but you will give this sum for a plate with smoke on it!"

KATE KAUFFMAN.

CONTRIBUTED RECIPES.

CREAM CAKE.—Five eggs, one pint of sour cream, one cup of sweet milk, one cup of butter, four cups of sugar, two teaspoonfuls of soda, four of cream of tartar, flour to make a stiff batter. This makes a very large and delicious cake; bake forty minutes. **GERTIE.**

CORN MEAL GEMS.—One cup granulated meal, two teaspoonfuls flour, two teaspoonfuls sugar, one heaping teaspoonful baking-powder, one egg and sweet milk enough to make a thin batter; bake in gem tins in a well-heated oven.

A SORE THROAT is soon relieved by Dr. Jayne's Expectorant, an old remedy for Bronchial and Pulmonary disorders.

SCOTT'S EMULSION



Of Pure Cod Liver Oil and HYPOPHOSPHITES of Lime and Soda

is endorsed and prescribed by leading physicians because both the Cod Liver Oil and Hypophosphites are the recognized agents in the cure of Consumption. It is as palatable as milk.

Scott's Emulsion is a perfect Emulsion. It is a wonderful Flesh Producer. It is the Best Remedy for CONSUMPTION, Scrofula, Bronchitis, Wasting Diseases, Chronic Coughs and Colds. Ask for Scott's Emulsion and take no other.

WHAT TO GET,

AND

HOW TO GET THEM.

Nearly 250 Articles, for Men and Women, Boys and Girls, and the little tots, too, are described in our Annual Premium List, recently sent to all of our subscribers. (If you did not get a copy, or if yours is lost, write for one—it is sent free to all who ask for it.) From it you can make the best selections, without any of the trouble of going to several stores, and most of the goods are offered

Cheaper than They Can be Bought in the Stores.

FREE FOR 60 DAYS FREE

1200 of these beautiful 18 k. gold plated watches to be given absolutely FREE to 1200 persons who will read this advertisement and help introduce new subscribers to the HOUSEHOLD COMPANION—Offer No. 1 The HOUSEHOLD COMPANION will be sent six months FREE to 1200 persons who will answer this advertisement and send us the address of 20 newspaper readers, representing different families. Premiums sent same day subscriptions are received. The old reliable and popular Illustrated HOUSEHOLD COMPANION of New York, is a complete family paper in its fullest sense. Each issue promises and beautifully illustrated, containing several complete and serial stories of fascinating interest, and a rich variety of funny sketches, anecdotes, news, condensed notes on fashion, art, industries, literature, etc., and stands conspicuous among the Illustrated Metropolitan journals of the country. Remember we gained and maintain our immense popularity and circulation by giving only valuable and useful premiums, and that it would not pay an old established prominent New York paper to disappoint its patrons. If you want one of the above premiums, and will promise to assist us send 15 cents. In silver or stamps, to help pay postage, packing, etc., and you will get prompt attention by return mail. Address HOUSEHOLD COMPANION, New York City, P. O. Box 2049.

Our Sunday Afternoon.

WHEN DAYS ARE GONE.

WHEN disappointment's heavy hurt
Within the heart is chronicled,
And woe broods by us night and day
God seemeth less than merciful;
And then it is we feel that human woe and
weal
Is not within the hand that fashioned sea and
land.
Thus closely circled in our suffering seems
akin
To cruel, needless pain, which holds no meed
of gain.

But when from heights of years achieved
We backward look along the way,
We know that what we struggled for
In finest mercy was withheld,
By Him who holds the spheres, yet knows our
hopes and fears;
And when the days are gone and we are in the
dawn
Of larger, fuller life, beyond confusing strife,
We see God's way is best and that e'en woe is
blest.

—The Journalist.

"CAST DOWN, BUT NOT DESTROYED."

Do you ever reflect
that Washington
lost far more battles
than he gained,
and yet if he was
not a successful
man, where will
you find one?
Think of this when,
after your best efforts,
you find yourself defeated,
and are ready to give way
to despondency. Almost

all successful men have been made so by
battling with difficulties that seemed over-
whelming—"Cast down, but not destroyed"
has still been their motto. The struggle
has developed nerve, and muscle, and
brain power, that in the end won a glorious
success. The words of Burns are in point:

"Though losses and crosses
Be lessons right severe,
There's wit there, you'll get there,
You'll find no other where."

When you come to think of it, do you
recall a single great enterprise that ever
succeeded from the very start? Look at
the tug and toil for years to which Mr.
Goodyear was subjected before he com-
pleted his improvements in the process of
manufacturing India-rubber. He was the
laughing-stock of his associates, and few
could be found who had faith in his
transactions. Said one who was describ-
ing him to a friend: "If you meet a man
with an India-rubber hat, an India-rubber
coat and pants, an India-rubber pocket
book, without a cent in it, that is Charles
Goodyear." His name, to-day, stamped
on an article, gives it a very ready sale,
and he will always be one whom the
nation delighteth to honor. Our poor
soldiers who wrapped themselves in his
blankets in the wintry storms, will always
remember him with gratitude. Without
such protection, thousands more would
have perished in camp than fell by the
enemy's bullets. It was well for the world
that he did not suffer himself to be turned
aside or cast down by repeated failures
and difficulties.

THE MINISTER AND THE MINISTER'S WIFE.

There is, strictly speaking, no propriety
in expecting the woman who has espoused
a clergyman to have, ex-officio, special
fitness for all departments of charitable
and religious labor, says Marion Harland
in *North American Review*. Common
sense rules that she may suit him excel-
lently well as a wife, yet be endowed with
no peculiar gifts for "leading meetings"
and "taking chairs." Yet, by an anom-
alous incongruity, inseparable from the
situation, the next worst thing to absolute
insignificance in her case is decided sig-
nificance. To outshine or outwork her
lord is to demonstrate his insufficiency to
fill the high and responsible office to which
he was elected. If she be a cipher, she
detracts from his worth. He cannot, after
the manner of other public men, bask in
the knowledge that their houses are their
castles, cast himself between her and her
censors with the protest, "A poor thing,
but mine own!" I have known men thus
"hindered" to drag the shrinking weak-
lings into the fore-front of the battle,

prick them into action beyond their
strength by frantic appeals to expediency,
custom, pride, love, piety, until the vic-
tims of a false system, wounded and
worn to their death, fell under the
harness so much too heavy for them. The
gaps they leave are quickly filled, often
by stouter stuff. If I dared relate the
humble tragedies of this kind which have
come under my eye, the rush of recruits
into the places of the fallen martyrs might
be less eager.

THE MAN WHO IS ALWAYS RIGHT.

It is exceedingly difficult to get along in
this world with the man who is always
right. His standards are different from
those of other men. He has such ideas
about his own judgment and of his own
conduct that it is generally worse than
useless to point out errors into which he
may have fallen, mistakes which he has
made, or sins which he may have com-
mitted. He is not to be taught; he knows,
and that is enough. It is not often that
he succeeds in convincing others of the
justice of his pretensions or claims, but
this makes no manner of difference to
him; he is right and always was right,
and is always likely to be right. He is
"not as other men are," nor even like the
average publican. He perhaps fasts and
prays, and gives tithes of all he possesses;
but he does not confess his faults, and he
does not turn away from evil-doing, for
he is always right.

Let Christians beware how they occupy
such a position as this; let them rather
say with the publican, "God be merciful
to me a sinner," so shall they go down to
their houses justified.—*The Common People*.

ANCIENT BABYLON.

Babylon, the great city of the Chaldeans,
was five times as large as the London of
to-day. Its walls were as high as lofty
church steeples—340 feet from the ground.
The palace of Nebuchadnezzar, the de-
stroyer of Jerusalem, was seven miles in
circumference. The bed of the great
Euphrates was paved with bricks. The
palaces and temples were full of wonder-
ful triumphs of painter, sculptor, and of
libraries of history, science and letters.
The Babylonians were astronomers of
great proficiency, considering the age in
which they lived, and they watched the
movements of the heavenly bodies with
intense interest and recorded them with
accuracy. The moon was the object of
their especial regard, and her changes
were noted with unflagging assiduity and
recorded in calendars. They called her
the father of the sun.—*Ex.*

A WHOLE FAMILY IN HEAVEN.

The following eloquent passage is from
the pen of Albert Barnes: "A whole
family in heaven! Who can picture or
describe the everlasting joy? No one
absent. Nor father, nor mother, nor son,
nor daughter away. In the world they
were united in faith, and love, and peace,
and joy. In the morning of the resur-
rection they ascend together. On the
banks of the river of life they walk hand
in hand, and as a family they have com-
menced a career of glory which shall be
everlasting. Hereafter, there is to be no
separation in that family. No one is to
lie down on a bed of pain; no one to sink
into the arms of death. Never, in heaven,
is that family to move along in the slow
procession, clad in the habiliments of
woe, to consign one of its members to the
tomb. God grant that, in his infinite
mercy, every family may be thus united."

PAINFUL LEAVE TAKING.

Who does not dread the visitor who
starts, then thinks of something else to
say; rises, and then thinks of another
subject of conversation; nearly reaches
the door, and then has another revelation;
reaches the door, and, most probably
holding it open, is aroused to a degree of
mental brilliancy that threatens his health
and that of his host or hostess by long de-
taining of both in a cold draft while
he discourses? What a tax on the patience
and politeness of the listener, who vainly
strives, by assenting instantly to every
proposition, to end the interview and
break the restraining bond of polite atten-
tion.—*New York Sun*.

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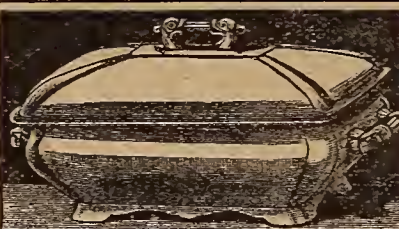
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10 Stops, 5 Octaves.
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AFTER ONE
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Containing 75 Christmas Presents, as follows:—1 Pretty Doll, 7 in. tall, life-like features, curly hair, 4 dresses and hats; 1 Set Toy Furniture, 25 pieces. Sofa, Table, Bureau, Chairs, etc.; 1 Menagerie, containing 33 Animals, Bear, Lion, Dogs, Hares, Cattle, Cows, etc. Also, 10 Toy Soldiers and 1 Pictures Story Book, all painted in fancy colors, surpassing anything of the kind in the toy line, and furnishing endless amusement for a house full of children. You can buy nothing more appropriate to give as a Christmas Present.

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If afflicted with sore eyes use

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Rag Carpet Loom.—A. C. C., Churchill, Mich., wishes the address of a manufacturer of rag carpet looms.

Stump Puller.—R. M. W., Louisburg, Kan. An excellent stump puller is made by H. L. Bennett, Westerville, Ohio.

Johnson Grass.—W. M., Clyde, N. Y. You can get Johnson grass of the seedsmen who advertise in FARM AND FIRESIDE.

Book Wanted.—H. M. M., Denver, Col. For book wanted write to any large book firm. Try Robert Clarke & Co., Cincinnati, Ohio.

Artists' Materials.—R. H. M., Hickman Mill, Mo. You can get artists' materials of Thayer & Chandler, 50 Madison st., Chicago, Ill.

Book on Trapping.—S. E. W., McGaheysville, Va. Dick & Fitzgerald, New York City, publish a book called the Amateur Trapper, which would probably suit you.

Garden Seeds.—L. M. S., State Mills, Ohio, asks where he can obtain good garden seeds. Watch our advertising columns, and send for catalogues to the seedsmen who use them.

To Get Rid of Stumps.—S. J. C., Lyons, N. Y. The best ways of cleaning ground of stumps that we know of are good stump pullers, and blasting powder or dynamite prepared for that purpose. Both are widely advertised.

Passion Flowers, to Propagate.—O. S., Ottawa, Illinois. Passion flowers can be readily propagated by cuttings of young shoots, about six inches long, taken in the spring, inserted singly in small pots of sandy soil, and placed under a close propagating frame.

Dusty Hay.—C. U., Dayton, Iowa, asks: "What makes hay dusty in the mow?" It was not properly cured when put up. It should be sprinkled before it is fed to horses. Throw down from the mow enough for one day's feed, spread it about, sprinkle it with water, using a common tin sprinkling can, pile it up in a compact heap, and the moisture will spread evenly through it and settle the dust.

English Sparrows.—J. J. M., Norwalk, Wis., writes: "About one hundred English sparrows have been on my farm for two months. Will they benefit the farm by destroying insects next summer, or had I better destroy them? They have not been here before."

REPLY:—Sparrow pie is said to beat chicken pie. We advise you to add it to your bill of fare. Enough sparrows will escape you to keep up the supply. The general verdict is that English sparrows do more harm than good.

Resetting Rhubarb.—G. T. R., of Easton, Md., asks: "Should rhubarb be taken up to set out again before the stalks die down, or while the plants are dormant?"

REPLY BY JOSEPH:—With the exercise of proper care, rhubarb, or pie-plant, can be transplanted at almost any time when the ground is not frozen. The best plan, however, and the one usually practised and invariably accompanied by success, is to operate with dormant plants. Either in fall or spring take up the old roots, divide them in the usual way, and reset the pieces, not less than four feet apart each way, in well-prepared and well-enriched soil. A good dressing of good compost should be given to the plants every fall, no matter whether the patch is young or old.

Manure for Garden.—A subscriber of Centraia, Mo., asks how he can make his garden rich in the quickest and cheapest way. "Can get stable manure, three miles away, at ten cents a load. Muck might be had by hauling one mile. Composted with its own bulk each of wood ashes and lime, it has given excellent results last year; but wood ashes cannot be had now."

REPLY BY JOSEPH:—Get all the stable manure that you can haul at ten cents a load, and compost it; then apply, the more the better. It is by far the cheapest fertilizer you might expect to get anywhere, even if you have to draw it three miles. The muck compost, no doubt, is also good. In the absence of wood ashes, cotton-seed hull ashes would be an excellent thing. Kainit and bone dust would also do it.

Sawdust as Absorbent.—L. N., of Dorchester county, Md., writes: "My soil is sandy loam, deficient in humus. Will it pay me to use sawdust in my yards and stables to increase amount of manure, in the hope of adding humus to the soil? I have but little straw, and cannot plow under clover; so it is sawdust or nothing."

REPLY BY JOSEPH:—I would be tempted to use sawdust for the sake of cleanliness, but would prefer nothing to it as an ingredient to put into the soil. When thoroughly rotted, sawdust is good enough for an addition to the manure heap, but I detest the average fresh article. It takes a good while before it will rot, and it is apt to bring insects and fungus diseases. Swamp muck would be just the thing for our friend, but in its absence he might dig up soil and sods from the fence rows, road sides, etc., and use it for bedding and as absorbent. If he has no clover, it is in his power to grow it in a year or two, or, if not clover, he may grow black peas or other soil-improving crops, and plow them under.

Fertilizer for Irish Potatoes.—A. S. H., of Clunchula, Ala., asks if an application of 1,200 pounds of cotton-seed meal, 800 pounds of acid phosphate, and 1,000 pounds of cotton-seed hull ashes, will be sufficient to fertilize one acre for a good crop of potatoes.

REPLY BY JOSEPH:—I would call this a pretty large dose. A ton of best special potato fertilizer contains about 80 pounds nitrogen, 140 pounds phosphoric acid and 160 pounds potash, while the proposed mixture has 75 pounds nitrogen, 220 pounds phosphoric acid, and 230 of potash. It will do no hurt to increase the proportion of cotton-seed meal—say, to 1,500 pounds, and to make those of the other ingredients much smaller. If the proportions, for instance, are 1,500 pounds cotton-seed meal, 600 pounds acid phosphate, and 600 pounds cotton-seed hull ashes, you will have in this mixture about 95 pounds of nitrogen, 145 pounds of phosphoric acid, and 160 pounds of potash, or just about as much as contained in a ton of

the best potato manure usually sold at \$42 per ton. Of course the plant food in the latter is more immediately available, and for this reason less of it may give as good, practical results the first season, but the other will be more lasting.

Cauliflower Growing.—R., of Easton, Md., writes: "I desire to grow late cauliflowers for pickling purposes, on a piece of low land—a rich, black, moist loam. Cattle have grazed on it for eight or ten years. What does Joseph think of my chances of success?"

REPLY BY JOSEPH:—Cauliflowers are a peculiar crop. They often fail under what we consider the most favorable conditions. The chief requisites are a very rich, cool, moist soil, which you seem to have at your disposal; a constant supply of moisture, and cool, moist atmosphere, which depends somewhat on the meteorologic (and therefore uncertain) conditions of the season; and good cultivation, which to give is in your power. In the first place, you must use the very best of seed. I think if you can get such as I used last season (a product of American soil, grown by Mr. March, of Fidalgo, Washington), you will be all right, but usually the best seed is enormously dear, and a crop is always an uncertain thing. Next, you should plant late enough so that the plants will head during the cooler weather of autumn. High temperature and dryness are the great enemies of the cauliflower crop, and plants will not head during the heated term. Long Island is the paradise for cauliflower growers.

Tanning Skins.—J. R. W., Newton, Miss. The following is Dr. Chase's "Fifty-Dollar Recipe." First, trim the skins of all useless parts, and soak them till soft, then flesh them well and soak them in warm water for an hour. Take for each skin, borax, saltpetre and glauber salt, of each one half ounce, and dissolve with soft water sufficiently to allow it to be spread on the flesh side of the skin. Put it on with a brush, thickest in the center or thickest part of the skin, and double the skin together, flesh side in, keeping it in a cool place for twenty-four hours, not allowing it to freeze, however. Second, wash the skin clean, and then take sal-soda, one ounce; borax, one half ounce, refined soap, two ounces; melt them slowly together, being careful not to allow them to boil, and apply the mixture to the flesh side as at first; roll up again and keep in a warm place for twenty-four hours. Third, wash the skin clean as before, and have saleratus (two ounces) dissolved in hot rain-water sufficient to saturate the skin; then take alum, four ounces; salt, eight ounces, and dissolve also in hot rain-water; when sufficiently cool to allow the handling of it without scalding, put in the skin for twelve hours, then wring out the water and hang up for twelve hours more to dry. Repeat this last soaking from two to four times, according to the desired softness of the skin when finished. Lastly, finish by pulling, working, etc., and finally by rubbing with a piece of pumice stone and fine sandpaper. This works admirably on sheep skins as well as on fur skins, dog, cat or wolf skins, also making a durable leather, well adapted to washing.

Composting Hen Manure.—Subscriber of Romulus, Mich., writes: "Every day I gather my hen manure and put it in a barrel filled with water. Once a week this is emptied upon a layer of straw, sawdust or other refuse in a bin twelve feet square. Another layer of litter is put on the first, and the next application of dissolved hen manure made at the end of another week, and so on. Slops from the house, wood ashes, etc., are also put on this pile. Am I doing right? Should the pile be under cover, or exposed to the rains?"

REPLY BY JOSEPH:—Hen manure is worth saving in best possible condition. Composting it with stable manure, thus making the latter richer and more valuable, is a good way, and all that is needed in that case is to clean out the hen-house from time to time—say, once a week—and scatter the contents upon the manure pile, forking the whole over, as in the usual course of composting. The slops from the house should also go upon the compost heap. Wood ashes, however, should be saved and kept by themselves, never mixed with manures, except muck, etc., for the sake of making its plant foods available. I prefer to keep my hen manure by itself, also, as dry as possible, and only using some sort of absorbent, like dry muck, sifted coal ashes, plaster, kainit, forest leaves, etc., no water, unless it be urine, and then only enough to keep the heap just moist, not wet. With proper management this material may be allowed to accumulate under the roosts until spring, without injury to the fowls, and without deterioration of the manure. Guard against excessive moisture. The hen-house must have proper drainage, so that no water will stand in it to leach out the strength of the manure. There is no advantage in dissolving hen-droppings in water, unless this is wanted to put upon a compost heap that is too dry, and therefore heating too rapidly. In that case the practice is all right. A compost heap properly made—that is, deep enough so the rains cannot leach clear through, is well enough off outdoors exposed to the rains. See, also, reply to query concerning sawdust.

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 35 King Avenue, Columbus, Ohio.

Thoroughpin.—S. A. J., Garden Prairie, Ill. The "pufts" it seems, are what is called a thoroughpin. A treatment is sometimes successful, or partially successful, but usually only for a short time. Hence it may be best to leave the pufts alone, or else use tincture of iodine, to be applied once a day.

Collar Boil.—C. C. O., Seville, Iowa. To simply lance a collar boil leads to nothing. It requires a surgical operation and surgical treatment, therefore apply to a veterinarian to undertake the treatment, and when the animal is cured, have the collar changed in such a way that it will not press upon the sore spot.

Diarrhoea.—J. A. W., Einstein Silver Mine, Missouri. If you had stated how and with what your calf is fed, and how the same is kept, I might have been able to prescribe for it. At any rate, change its food, give nothing but what is sound and easy of digestion—good

hay, for instance—and keep the calf in the stable. You may also give, every morning, a drachm of sulphate of iron in the water for drinking, until the diarrhoea is stopped, or until the drug changes its color—becomes slightly blackish.

Worn Out.—P. W., Strathroy, Ont. I am afraid you have a thoroughly worn out animal, probably much older than you think, an animal that, very likely, not only suffers from digestive disorder, but has also defective teeth. I therefore advise you to have his molars or grinders examined by a competent veterinarian who knows what to do and what not to do in such a case.

How to Pen Young Pigs.—P. H., Blaine, Kan. Put a fender in your pig-pen so that the sow cannot lie down on the pigs, and let the latter suck. When this reaches you through the paper, your pigs, if not starved to death, will be old enough to be weaned, anyhow. Besides that there is no need of feeding young pigs with cow's milk if the sow has milk enough, because the fender will make it impossible for the sow to lie down on the pigs.

Wire-fence Wound.—W. J. F., Stokesville, N. Dak. Whenever a leg is thus injured, the treatment requires scrupulous cleanliness, a strict antiseptic treatment and proper bandaging, otherwise swelling, finally resulting in a degeneration of the tissues, and even elephantiasis, will remain behind. Too much liniment irritates and has in all such cases an injurious effect. As to the treatment of such chronic swellings, please consult the late issues of this paper.

Ringbone.—J. L. H., Lowell, N. C. I refer you to what is said in this issue in regard to spavin. The morbid process in ringbone and spavin is identical. The difference is in the seat of the two diseases. The treatment, too, is the same, but, on the whole, is oftener successful in spavin than in ringbone. As to the latter, success can be expected only if the morbid process is limited to the middle, or coronet joint—that is, the joint between the first and second phalanges—if the formation of the joint is sufficiently strong, and if the disease came on after hard work or severe exertions.

Probably Spavin.—F. J. P., Fergus Falls, Minn. In the first place, I do not make any contracts with anybody for the cure of horses or any other animal. Secondly, it is always a bad speculation to buy lame or crippled horses, no matter how cheap they may be, because any one who sells them has surely tried everything to cure them, and convinced himself of the incurability of the lameness, before he makes up his mind to sell them lame or crippled. Thirdly, spavin may exist, and cause lameness without showing any enlargement. Hence there is no reason to doubt the correctness of the diagnosis made. Still, if there should be an error, then the disease, very likely, is ringbone, which is even worse than spavin.

Skin Disease.—B. R. B., Amlret, Minn. Your sow is affected with a skin disease, but as you state no particulars, except that much of the hair came off, and that gradually a scurf formed over the body, it is impossible to determine the nature of her skin disease. It may be mange or it may be lice, or, possibly, if your sow is white, you may have fed buckwheat. If it is mange, you may give her a thorough washing with soap and warm water, and then, before she is perfectly dry, wash her thoroughly with a 2-per-cent solution of carbolic acid. At the same time, however, her pen must not only be well cleaned, and all litter and manure be removed, but also the woodwork of her pen must be whitewashed or cleaned with the same carbolic acid solution. In about six days the same treatment must be repeated.

Swine Plague.—G. D. D., Luray, Va.; G. E. J., Parkston, S. Dakota; J. McL., Brooklyn, Iowa. Inquiries from the above probably all relate to swine plague. I say probably, because Mr. J.'s pigs, it is possible, may not be affected with that disease, because some of the symptoms given—the sneezing and the discharge of a whitish substance from the nose, etc.—may be due to the presence of lung worms, and the paralytic symptoms may be due to other causes. It is impossible to base a diagnosis upon a meagre description, if no characteristic symptoms are given and essential information is omitted. There is no remedy for swine plague if the morbid process is once fully developed. If the attack is not a severe one, and the affected animals are otherwise strong and vigorous, and not too young, a good dietical treatment and good care may assist them to overcome the attack. Medicines are ineffective. Still, all of the inquirers ask for a "cure," and none of them for what is of much more importance—a means of prevention.

Fistula.—M. L., Morse Bluff, Neb. You can never expect to bring a fistula to healing unless you provide for proper drainage; that is, by making an opening or openings low enough so that the pus can and will be discharged without any impediment from every part of the fistulous canal. After this has been done, the callous walls of the fistulous canal must be destroyed by some caustic. As such, a concentrated solution of sulphate of copper, 1:4, will answer. If it must be injected, it should be done from below, but if it can be applied by means of absorbent cotton, it is preferable. Two or three applications a day will be enough, but as soon as the destructive work desired has been accomplished, the solution must be considerably diluted. The most exact cleanliness is absolutely necessary. Still, as the treatment is a tedious one, and as you, very likely, the same as most other farmers, will get tired of it before you are half through, and will neglect the animal, I advise you to commit the treatment to a veterinarian, who will effect a healing in much less time than you or any other farmer.

Actinomycosis.—H. R., Remus, Mich., R. F. McN., Pleasantville, Ohio, M. C. S., South Auburn, Neb. If the so-called lump is movable beneath the skin, in other words, if the morbid process is not in the bone, the operation described fully in the issue of this paper of June 1st will effect a cure in every instance, provided, of course, the operation is performed exactly as described. If Mr. R. failed, there is something wrong; either the operation has not been performed as it ought to be, or else his druggist has given him adulterated arsenious acid, perhaps an article adulterated with heavy spar, which, of course, is ineffective. When the seat of the morbid process is in the bone, a cure is, for obvious reasons, seldom effected, and then only in the beginning. The operation described cannot be applied. The fungil, called actinomycosis, which causes the disease, and are introduced with the food—hay principally—enter the organism through internal and external sores and lesions. If the morbid process develops in the tissues beneath the skin, it must be supposed that the skin has been lesioned or abraded; if in the jaw-bone, the entrance

usually takes place at the root of a tooth, especially at the root of a diseased one, and if in the tongue, an abrasion or sore has existed in that organ, and afforded an entrance. A direct communication from one animal to another does not take place. The disease is infectious, but not contagious.

Worms in Horses—Ticks on Hogs.—J. N. H., Tualatin, Wash., and D. G. G., Walton, Oregon. As both inquiries are about worms, one answer may suffice. Worms in the rectum are best removed by a few injections of raw linseed oil; but worms in the stomach or in the duodenum and the other small intestines, require internal treatment. The following compound will in most cases answer the purpose, provided it is given on an empty stomach: Tartar emetic, half an ounce; camphor pulv., three ounces; rhizom. glycyrrh., pulv., two ounces; rad. althaeae pulv., two ounces; and water, just enough to make twelve cartridge-shaped or cylindrical pills, which ought to be coated with tissue-paper. Six of these pills constitute one dose, which should be given early in the morning before the horse has eaten anything, and then the animal should not be fed anything until noon. The other six must be given the next morning under the same conditions. I said this compound will answer in most cases, but not in all, because different worms require different treatment. As to the ticks on hogs, if you mean ticks, and not lice, you will have to keep your hogs out of the woods, and then apply a drop of oil to each tick.

Spavin.—A. H., South Hartford, N. Y. Your horse acts as if spavined, and not as if something is the matter at the stifle. If the patella or knee-pan were dislocated, the horse would not be able to use the leg at all, because it would be rigid, and be dragged on the ground. Whether there is any help I cannot tell you, because I do not know what kind of a horse you have, how his joints are formed, and how the lameness came on, etc. Besides that, I am not sure that your horse has spavin, although your description points that way. The lameness caused by spavin can be removed only if the seat of the morbid process is limited to the lower or semi-movable joints of the hock, if the animal is strong and vigorous, not past middle age, and if the natural formations of the hock-joint are sufficiently strong to support not only the weight of the animal, but also the strain and concussion that may be thrown upon it. Hence the lameness is seldom removed, if spavins come on before the animal has seen hard service, or while idle in the pasture or in the stable. In order to remove the lameness, ankyolysis must be produced in the diseased joint; that is, the diseased bones must be caused to grow together. This requires a certain degree of an exudative inflammation, and, of course, strict rest for at least two months. Hence the treatment is usually successful only in the winter, after the flies are out of the way. The required degree of an exudative inflammation can be produced and supported in various ways. First, by firing. The principal objection to it is that it leaves scars, constituting a label, which reads: "This horse is spavined." Besides that, the operation requires excellent judgment, because once performed, it is out of our control. Another way is to put a seton just over the diseased bones, which may be left there from ten to fourteen days. This, too, by the scars it produces, labels the animal as spavined, though not with so big letters as firing. By inserting the seton, as well as by firing, the vein on the forepart of the inside of the hock-joint must not be injured, and if a seton is preferred, the joint must be frequently cleaned after suppuration has set in. Both ends of the seton may be tied together so that it may not fall out, and be turned about once every 24 hours. A third method, which produces no blemish, consists in repeated applications of a sharp ointment, provided the latter does not contain anything that destroys the roots of the hair. An ointment composed of biniodide of mercury, half a drachm, and hog's lard, one ounce, will answer, provided it is well prepared. Enough of it (it takes but little) to produce the desired degree of inflammation, may be thoroughly rubbed in over the diseased bones, and in order to keep up the inflammation, the application may be repeated, say, twice a week for eight weeks in succession. Meanwhile, the horse must be kept quiet in the stable, when water as well as food must be carried to him. Whenever the crusts of dried exudation are too thick to apply the ointment directly to the skin, the crusts may be softened with a little oil or pure lard, and then the next day be scratched off. Immediately after that the ointment can be applied again. The horse must be kept in the stable until, after the last application of the ointment, every symptom of inflammation has disappeared. When this is the case, but not before, the horse may be taken out, and be caused to walk a few rods. If he shows no lameness, he should be taken back into the stable, and then the next day he may be allowed to trot a short distance, but should not be subjected to a real or any severe test in less than a week, and nobody should ride him horseback in less than two or three months after the lameness has disappeared. If the treatment has been carefully executed, and still has remained unsuccessful, it is very seldom any use to commence it again. The horse may be set down as incurable.

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Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

FRENCH METHODS WITH POULTRY.

EXPERTS do the killing in France, and also at Hammonton, N. J. In France an expert will kill and pluck one fowl a minute, the birds being stuck in the back of the roof of the beak. By plucking instantly it avoids tearing the skin, which is more difficult when the carcass becomes cold. When the operator kills he has three baskets near him, into which the feathers are dropped according to size.

In France the down is left on chicks that have been killed, as an index of the age. On fowls they leave a few feathers on the rumps. As soon as a fowl is plucked, before cold, it is laid on its back on a bench, and wrapped with a wet, linen cloth, to mold the shape, and to give the skin a nice appearance.

Nearly everything is utilized. The feathers are carefully assorted, dried and sold. The intestines are boiled, the fat skimmed off (which is sold) and the intestines minced as food for poultry, the liquid being given to the pigs. The combs and kidneys are sold to pastry-cooks, the first for decorating and the latter for flavoring pies. The heads, necks and feet are sold to hotels, restaurants, etc., for flavoring sauces or for being boiled down to make jelly. There is a wholesale market, called La Vallee, in Paris, and the agents are licensed, the poultry being sold to the highest bidder. Every village has its weekly markets, and the police regulations of these markets are very strict.

There is no truth in the report of large broiler farms in France, as investigation showed that they did not exist. Although France produces enormously of poultry, yet more chicks are hatched artificially, at Hammonton, than in the whole of France. The French method of selling, however, is superior to ours, as the stock, being sold at auction, places the producer in a position to know exactly the price received, as the sales are made openly.

There is no reason why the economical methods of utilizing the whole of the carcass should not be practiced here, especially the saving of the feathers. The breeds mostly used are the Hondans, La Fleches and Crevecoeurs. Nearly all the French fowls are black in plumage, or nearly so, and they pay no attention to the color of the legs.

BOWEL DISEASE.

As cold weather approaches, there will be fewer cases of cholera, but diseases similar to cholera will make their appearance. This difficulty, in a majority of cases, may be traced to overfeeding, lack of exercise and the want of a proper supply of sharp, gritty material (which cannot be procured by the fowls in winter) so necessary for the proper reduction of the food. Nearly all cases of bowel disease may be traced to indigestion, which, in turn, is the result of the inability of the fowl to grind the food in the gizzard.

AN EXPERIMENT WITH GRIT.

You may suppose that because your hens have the run of a range, they procure all the gravel they desire, and so they can—of round gravel—but as the run may have been searched over for months, and perhaps years, the supply of sharp material may be scarce. To test this, break up some glass, old china, or other brittle material, and notice the avidity with which the hens will eat it. It is just as necessary to supply the hens with grit as it is to provide them with food.

FEEDING BONES.

The hens will always prefer bones when the bones are pounded and broken into pieces the size of a grain of corn. Bone meal, ground bone or bone that has been bleached, is not always acceptable, but when fresh bones are pounded the hens will prefer them to anything else. A mess of pounded bones, three times a week, will almost invariably induce the hens to lay when many other methods fail.

GIVING WATER IN WINTER.

When freezing weather comes, all earthen vessels will be liable to injury from the cold. To properly water the hens in winter, use clean, wooden troughs, and pour warm water in the troughs three times a day. The warm water will invigorate the hens and assist in promoting laying. The allowance of water three times a day will answer as well as the practice of keeping water before the hens, the only objection being that it will require a little more attention, but the extra care given in this manner will result in more eggs.

WINDBRAKES.

All poultry yards should be protected by a windbreak on the north, during the winter, especially if wire fences are used. If a board fence is made it will answer well, but boards are expensive where there is much fence to erect. Cornstalks may be placed on the outside of the fence, however, with but little cost, or evergreen boughs may be arranged for the purpose. The cold winds are detrimental to egg production.

BUTTERMILK.

Buttermilk is highly relished by all kinds of poultry. If thickened with corn meal and fed to ducklings, it will make them grow rapidly. It is also excellent for laying hens, and if the food of chicks is mixed with buttermilk, it will render the food more complete and nourishing.

LOW PRICES NOW.

Prices will now be low until after Christmas. You have a good market at home, however. Instead of shipping your surplus poultry away, to be sold at a sacrifice, consume it on your own table. It is cheaper to use poultry than to buy beef, if the expenses of selling and the low prices are considered.

INQUIRIES ANSWERED.

Lice on Canaries.—"Subscriber" asks: "How can canaries be freed from lice?"

REPLY:—Dust them thoroughly with fresh Dalmatian insect powder, once or twice.

Hatching Black Spanish.—C. V. E., Fairwater, Minn., asks: "What time in the spring is it best to set Black Spanish eggs?—Also, is tarred paper good to make a hen-house comfortable?"

REPLY:—About April is the proper time to hatch young Black Spanish. Tarred paper is excellent for lining the interior of the house; it may be used over rough boards for building.

Scald Head.—A. W., Coal Bluff, Pa., asks: "I have a Leghorn hen that has no feathers on her head, and it is as red as blood. What can I do for her?"

REPLY:—It is a skin disease, sometimes called scald head, but is really the work of a parasite. Anoint the head twice a week with a few drops of a mixture of one part spirits turpentine and two parts crude petroleum.

Cholera.—J. P., Norway, Mich., asks: "What is the matter with my chickens? They appear dumpy, and refuse to eat in the morning. They turn black in the head and comb, they have a bad diarrhoea, and are dead by the next morning. Several of my laying hens have died, and then it took my young chicks."

REPLY:—It is no doubt cholera. Add a teaspoonful of liquid carbolic acid to half a gallon of drinking water, and allow no other water for drink. There is no certain remedy.

Loss of Chicks.—H. S., Menchville, Va., asks: "I lost nearly all of my little chicks this summer, and then tried to raise some this fall, but they are dying just the same as they did in summer. They eat well to the last, but their bodies swell up, and they appear to have the cholera, and die. Would be thankful if some one would give me a remedy."

REPLY:—The probability is that lice on the heads and necks cause the difficulty. Your description of symptoms is too meagre to permit us to arrive at the cause. You should state kind of food, and how you manage. The swelled bodies are due to indigestion, or imperfect food.

Roup.—C. M. R., Parachute, Colo., asks: "What is the matter with my fowls? The heads swell up and mouth and tongue form a hard kernel the size of a chestnut—often causing death, or in many cases the sight in one or both eyes is lost. Also, what is the cause of a hen drooping for days, and the egg sack bursting and causing sure death?"

REPLY:—It is a form of roup, due to exposure to drafts from some source. Such birds should be destroyed, as a cure is difficult. The remedy is to inject a drop or two of a mixture of spirits of turpentine and glycerine in each nostril, and ten drops down the throat. Probably the hen is too fat, and has been injured in some manner.

CATARRH CURED.

A clergyman, after years of suffering from that loathsome disease Catarrh, and vainly trying every known remedy, at last found a prescription which completely cured and saved him from death. Any sufferer from this dreadful disease sending a self-addressed stamped envelope to Prof. J. A. Lawrence, 88 Warren street, New York, will receive the recipe free of charge.

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Our Miscellany.

Don't forget that a golden key will often find the way to unlock many a secret drawer.

The success which has attended the Cooley Creamer and its products in past years has continued to attend them this year.

The Sweepstakes Gold Medal on butter, awarded at the Paris Exposition, went to the Green Mountain Stock Farm, West Randolph, Vt., who made the butter by the Cooley Process. This award is all the more noticeable from the fact that the Cooley was awarded the Gold Medals at the Expositions of 1879 and 1882. The last after competitive tests of six weeks at the French Government Agricultural Experiment Station.

Thus the Cooley Creamer and products have been awarded the Gold Medal at every exposition since it was invented, which is certainly a very remarkable record, and made more noteworthy by the awards at the Bay State Fair, in Boston, at which there were more than two hundred entries of butter, the Gold Medal being won by a creamery using the Cooley Cream Gathering system, over dairies with their fine registered herds using Centrifugal Separators and other methods. This is a very significant victory, as it is the first time that the product of co-operative creameries of mixed herds has come in competition with the registered private herds, and therefore the award carries all the more credit and glory with it, and the successful creamery has just cause for congratulating itself upon its well-earned victory.

These make fourteen gold medals since the beginning of the fairs a year ago, that have been awarded the Cooley Creamer and its products, and makes the total number twenty-three gold medals, besides numerous silver medals awarded since it came upon the market.

PAPA started to wash little Elsie's hands in cold water, but she drew back exclaiming, "Papa, I want the water cooked."

CATARRH, HAY FEVER, CATARRHAL DEAFNESS A NEW HOME TREATMENT.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result is that a simple remedy has been formulated whereby these distressing diseases are rapidly and permanently cured in from one to three simple applications made at home by the patient once in two weeks. A pamphlet explaining this new treatment is sent free on application by A. H. Dixon & Son, 337 & 339 West King St., Toronto, Canada.—*Scientific American.*

LITTLE JOE was telling about a bunch he had discovered on the cow's leg. "How large is it?" asked his father.

"Well," said Joe, reflectively, "about as large as a good-sized small 'tater'!"

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 820 Powers' Block, Rochester, N. Y.

The Grand Prizes for Trial Subscribers.

December 1st the cash prizes will be awarded to those sending the largest lists of 3-months' trial subscribers, at 15 cents each. Although that is the date of this paper, it goes to press two weeks ahead of date, because of the large editions to be printed, and many readers get their paper before the date. Send us a large list at once, and even if you don't secure a cash prize, you will be sure of some of the valuable premiums offered on page 53, last issue.

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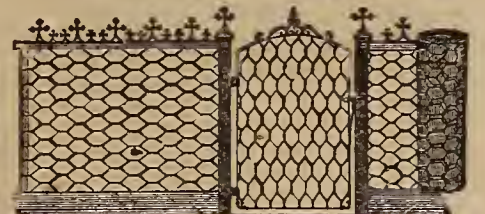
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- 16 Swinging in the Lane.
- 17 Kitty Wells.
- 18 Old Man's Drunk Again.
- 19 Kiss Behind the Door.
- 20 Mary of the Wild Moor.
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- 30 Darling Nelly Gray.
- 31 Little Brown Jug.
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- 37 Old Kidney Floor.
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- 41 Ring My Mother Word.
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- 43 Little Lee.
- 44 My Old Wife and I.
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In order to obtain new subscribers to our well-known paper, the LADIES' HOME VISITOR, we make the following offer: Send us 20 cents, stamps or silver, and we will send you our paper regularly for 4 months, and in addition we will give to first person sending 20c for Paper and telling us where the word RAIN is mentioned in the Bible (name book, chapter and verse) an elegant solid gold finishing Case Watch, Elgin Movement. To the next one giving correct answer, a handsome Silver Watch. To the next one we will send us correctly, a handsome Plated some Solid Gold or Filled Ring should 100 more answer correctly, they will also receive a handsome pair of Bracelets, of "diamond" design. Book of Instructions with each outfit. This is a great offer. You are bound to get a valuable present if you write now. This offer is not good after November 1st, as we give a list of lucky ones in December issue, which goes to press at that date. Address **Avon Pub. Co., Box 5320, Hockley, Mass.**

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Smiles.

DISENCHANTMENT.

While we gaze in admiration
On a sweet and radiant lass,
And think only sweetest music
Through those coral lips can pass,
We're awfully shocked to see her
Down the garden pathway stride
And hear her cry, "Say, Johnnie, come in,
Or mother will tan your hide!"

—Boston Courier.

SOMETHING ABOUT CARDS.

PROGRESSIVE euchre, whist, pennockle, old sledge, casino, seven up and other games with cards are going to be as popular as usual this season. I am not a victim to the card habit, and I don't know the jack of deuce from the queen of sevens. Anybody who picks me up for a sucker will quickly put me down when they come to the light. I am a pretty clever creature with the debilitated and numerically reduced deck with which euchre is played, but not to the extent that I cannot learn. I learned euchre rapidly after I once got so I could accurately add up the spots on the ace card. I soon got onto the technique of the game, and could tell the right bower from the big casino, without looking blaudly over my partner's shoulder to see what the leading features of his chapped hand were. But, even to this moment, if I get into a close game, where all is hushed and expectant and every man has his revolver where he can call it, and I hold the big casino and the right bower at once, I am liable to get confused and red about the ears. At such time I am likely to lean over and ask in a hushed, confidential tone, which card I ought to spell first in order to euchre my wicked partner across the table.

Progressive euchre is the most popular game in society at present. The worst and best players get prizes and the others get tired. I played it just one time, after which the coroner used to eye me gloomily. You progress from one table to another until you come to the supper-table, where you stay as long as possible. If you don't see what you want, you order it up. If you can't eat fast enough with your hands, you call for one spade and a jack-pot.

I don't often go to progressive euchre parties. As a player, Hoyle and I cardinally differ, and my unique sort of play renders me shunned. But this time there was just enough to go around, and one little lady heaved a sigh from her supper and took me into the firm with her. I dealt first. I am quite a dealer. In shuffling I cut the cards, shove the ends together and press. This makes them fly all over the table, some on their backs and some on others' backs, but it mixes them into a smooth batter, so to speak. Well, I shuffled, and after selecting the joker, both bowers, the king and ace of hearts, I turned up a heart for trump, and divided the rest impartially amongst the crowd. I then said I would pass, and asked the lady at my left if she didn't know of something right nice and simple she could make it.

At the next table, I kicked because I never got any fours and fives. I grew violent, and was held with difficulty. I was finally put out of the game when somebody said, "Diamonds is lead," for saying, "No, frisky birdy, you are mistaken. Diamonds are alum." They threw me into the lawn, and I care not for cards.

EDGAR ALLAN MORGAN.

A SUITABLE EPITAPH.

It has often been said that the chief characteristic of the epitaph is its lack of veracity, but it is perhaps better that it should err on the side of kindness rather than wound the living by a brutal truthfulness, as in the case of an inscription written for the tombstone of a lazy man by one who knew him well:

"Asleep (as usual)."

NOBLE RESISTANCE TO TEMPTATION.

"Have you spoken to my daughter about this?" said a New York parent recently, to a youth who asked him for his daughter's hand. "No, sir, I haven't," replied the youth; "but I was strongly tempted to last evening when she kissed me good night on the steps."

A WISH GRANTED.

She—"Oh, my tooth aches just dreadfully! I don't see why we cannot be horn without teeth."

He—"I think, my dear, that if you will look up some authority on that point, you will find that most of us are."—Omaha World.

ALL ABOUT THEM.

Prof. Rodder—"Can you tell me anything about the Bahamas?"

Smart boy—"Yes, sir. The Atlantic."—Life.

LOOK HERE, FRIEND, ARE YOU SICK?

you suffer from Dyspepsia, Indigestion, Sour Stomach, Liver Complaint, Nervousness, Lost Appetite, Bile, Exhaustion or Tired Feeling, Pains in Chest, Jaundice, Dry Cough, Night sweats or any form of consumption? If so, send to Prof. Hart, 83 Warren St., New York, who will send you free, by mail, a bottle of *Fluoroplexion*, which is a sure cure. Send to-day.

THE PROPER LENGTH.

A lawyer is presumed to be always able to suggest a difficulty, no matter how self-evident the case may seem; but the truly great lawyer knows how to state a point so that even a brother lawyer cannot start an objection. Stephen A. Douglas and Mr. Lovejoy were gossiping together when Abraham Lincoln came in. The two men immediately turned their conversation upon the proper length of a man's legs.

"Now," said Lovejoy, "Abe's legs are altogether too long, and yours, Douglas, I think are a little too short. Let's ask Abe what he thinks about it."

The conversation had been carried on with a view to Lincoln's overhearing it, and they closed it by saying:

"Abe, what do you think about it?"

Mr. Lincoln had a far-away look as he sat with one leg twisted around the other, but he responded to the question, "Think of what?"

"Well, we're talking about the proper length of a man's leg. We think that yours are too long and Douglas' too short, and we'd like to know what you think is the proper length."

"Well," said Mr. Lincoln, "that's a matter that I've never given any thought to, so, of course, I may be mistaken, but my first impression is that a man's legs ought to be long enough to reach from his body to the ground."—*Yankee Blade*.

FOUND THEM AT LAST.

[Three conceited wits passing along a country road, meet old farmer.]

First wit—"Good morrow, father Abraham."

Second wit—"Good morrow, father Isaac."

Third wit—"Good morrow, father Jacob."

Old Farmer—"I am neither Abraham, Isaac, nor Jacob, but Saul, the son of Kish, who went out to seek his father's asses; and lo, here I have found them."—*Siftings*.

HE WAS PARTLY RIGHT.

Husband—"Confound these thin walls. Why, you can hear that disagreeable child next door whining and crying, and the man in there is swearing at it like a trooper."

Wife—"That's our Willie crying, upstairs."

Husband (doggedly)—"Well, there's a man in there swearing about it, anyway."—*Life*.

TOOK IT FOR A BIRD.

"They have a dado there that is six feet high."

"In their dining-room?"

"Yes."

"Well, of course, it is caged?"

LITTLE BITS.

Don't hit a man when he is down—hit him while he is up a tree, and run away before he reaches the ground.—*Puck*.

"Oh, mamma," said little Lord Fauntleroy, fresh from the city, pointing to some sunflowers, "just see those pen-wipers growing over there."

Early morning caller—"Where is your auntie, Alice?"

Alice—"She is upstairs in her nightgown, looking over the baluster."—*Life*.

Bridget (her fourth day)—"Miss Jiny, one of yer mashes is in the parlor. I don't mean the dark feller with the curly eyelashes, but the blonde bloke with specs."—*Life*.

Marion Harland says that the coming woman will have her own bank account. This will prove pleasant news for the coming man, especially if her bank account is big enough for two.—*Norristown Herald*.

Douglas Mactervish—"Sandy, remember this, mon, honesty is aye the best policy."

Sandy—"How do ye know, Douglas Mactervish?"

Douglas Mactervish—"I hev tried baith."

Customer to grocer—"I want to get a pound of your old cheese."

Grocer—"All right, sir; I'll send it around in five minutes."

Customer—"All right, and let it bring a couple of crackers with it."

Enamored swain—"For you, darling, I wad lay me down and dee."

Practical maiden—"Tbat sort of thing is clear out of date, Willie. What a girl wants now-a-days is a man who is willing to get up and hustle for her."—*Terre Haute Express*.

Mollie (who has poured a glass of milk over her new dress)—"You will catch it, papa, just as soon as mamma comes home."

"But, Mollie, you spilled the milk over yourself."

"Yes, but you will catch it for not taking better care of me."—*Life*.

A fond mother had a favorite son who was a terror to the neighborhood. A gentleman entered her house with a large bruise on his forehead.

"Madam," he said, "a hoy who I am told is your son has just thrown a stone at me, causing this painful wound. What is going to be done about it, madam?"

"I don't know. Have you tried arnica?"

See back numbers of this publication for all parts.



Portrait of Kline. From a Photograph.

On account of a forced manufacturer's sale 125,000 ten dollar Photograph Albums are to be sold to the people for \$2 each. Bound in Royal Crimson Silk Velvet Finish. Charming decorated insides. Hand-somest albums in the world. Largest size. Greatest bargains ever known. Agents wanted. Liberal terms. Big money for agents. Any one can become a successful agent. Sells itself on sight—little or no talking necessary. Wherever shown, every one wants to purchase. Agents take hundreds and thousands of orders with rapidity never before known. Great profits await every worker. Agents are making fortunes. Ladies make as much as men. You, reader, can do as well as any one. Full information and terms free, together with particulars and terms for our Family Bibles, Books and Periodicals. Better write us at once and see for yourself. After you know all, should you conclude to go no further, why no harm is done. Address, ALLEN & CO., AUGUSTA, MAINE.

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\$13,000,000 is a Big Pile of Money to GIVE AWAY, but as I have got rich myself, I am ready to help others in my advancing years. It has always been said, when Old Dr. Brown opens his Safe Door, it would be a Grand Sight. You can now look on the inside. I am now ready to let you into the Secrets of Money Getting. Some persons, assisted by me, have made from \$2,000 to \$20,000 in ONE YEAR. You can do the SAME. Young or Old, Lady or Gent, money does not keep. It is going to be put out; now be sure and come in for your share. All want to get rich, we should all enjoy the of Life. I my agents) of Gold to guessing the ber of Silver pile under it.

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Our Household.

GOOD COOKING FOR THE FARMER'S HOUSEHOLD.

PORK.

Many country housekeepers are almost entirely dependent upon pork for meat, during the winter season, and when the time commonly known as "hog killing" arrives, quite a variety may be daily served on the farm table, if the off-fall is properly served. The accompanying suggestions will be found useful:

BROILED TENDERLOIN.—Take tenderloin, slice thin, season, roll in melted butter, broil over a clear fire until well done, take up, pour over melted butter, and serve with tomato sauce.

BROILED SPARERIBS.—Season, lay on a gridiron and place over a clear fire, turn frequently, and broil very done. Sprinkle with salt and pepper.

BAKED SPARERIBS.—Put in a dripping-pan with a little water, season with salt and pepper and bake half an hour. Make gravy of melted butter and a little mushroom catsup.

STUFFED SPARERIBS.—Take a large rib, make dressing of bread crumbs, sage, onions and butter, season with pepper and salt, spread over the rib, roll up, lay on potatoes in a dripping-pan, and put in the stove. Bake brown.

BROWNED BACKBONE.—Cut in pieces. Put in a pot of water, and boil two hours, take up and put in a pan, and set in a hot oven to brown. Peel some Irish potatoes and drop in the pot, boil until done. Mash and season, spread on a dish, lay the baked backbone on top.

BACKBONE PIE.—Take the smallest end of the backbone, cut in small pieces; put in water and boil until done. Make nice pastry, line the sides of a baking-dish with it, put in the bones, adding some of the water in which they were boiled, with a little butter, salt and pepper. Cover the top with crust, put in the stove and brown.

PORK ROYAL.—Take a piece of fresh pork, fill with grated bread and crust soaked in a little hot water, season with salt, pepper, onion, sage and thyme, also a little butter. Place in a pan with some water and set in the oven; when about half done, place around it some large apples; when done, take up with the apples around it. Make gravy and pour over.

Hog's LIVER.—Chop three pounds of liver fine, one pound of boiled ham, half a pound of bacon, two cups of grated bread crumbs, three eggs, and a little salt and pepper. Mix well together, and put in a tin mold. Set in cold water three hours. When cold, turn out in a dish and slice.

To STEW Hog's HEAD.—Clean the head and feet; take out the bone above the nose, cut off the ears and clean. Separate the jaw from the head; put the head, feet and jaw in water to cover, and boil until tender. Split the feet, hash the head, lay the jaw in the middle of the dish. Put the hashed head with the feet in the pot, season with cream, butter, pepper, salt, a teaspoonful of mustard, a tablespoonful of walnut catsup, with a little chopped onion and celery. Stew half an hour, take up the feet, lay around the jaw, and pour the hash over.

DRESSED Hog's HEAD.—Boil a large head and chop, season with two tablespoonfuls each of tomato and walnut catsup, tablespoonful of butter rolled in flour, pepper and salt. Pour over two cups of water, let simmer twenty minutes, squeeze in the juice of a lemon, and serve.

Hog's HEAD HASH.—Take the head, feet and jaw of a hog; boil until tender, cut fine and remove all the bones; add two chopped onions, a teaspoonful each of mace and cloves, with black pepper, powdered sage and salt. Put back in the liquor and cook half an hour, thicken, add two hard-boiled eggs, chopped.

SWEETBREAD OF HOG.—Parboil, put in a sauce-pan with a teaspoon of cream, a little vinegar, butter, pepper and salt. Stew ten minutes.

Hog's BRAINS.—Scald and clean. Have a skillet of hot lard, into which drop the brains with two eggs; season with pepper and salt, serve very hot.

Hog's FEET FRICASSEE.—Boil the feet till tender, remove the bones, make one pint of gravy; add to it a small glass of wine, the juice of one lemon, with pepper and salt. Stew the feet in this ten minutes, then add two beaten eggs, a spoonful of butter, two of flour, and a teaspoon of sweet milk. Shake over the fire five minutes, but do not boil.

ELIZA R. PARKER.

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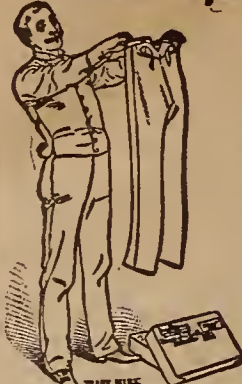
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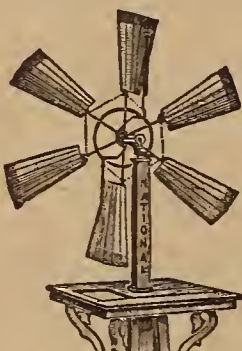
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Christmas Number of Housewife opens with the first chapter of "TRIP." A more beautiful story this gifted author has never written. The scene is laid in the plague-stricken city of Jacksonville; and the experiences of "TRIP" are related in so thrilling a way that each reader feels himself a party in the stirring incidents that overtake the hero and his friends, and must be the better for the acquaintance with the noble qualities of "TRIP." "THE LUNN'S CHRISTMAS," by DAVID LOWRY, and a Christmas story for children, complete the fiction. "THE STEAMING URN," of MRS. JOHN SHERWOOD, the authority on etiquette, answers many questions for those desirous of giving an "AFTERNOON TEA," in the most approved fashion. EMMA MOFFETT TYNG contributes a paper on "HOLIDAY GAMES AND DECORATIONS," that will aid the home decorator to give those festive touches to house and table so desirable at Christmas time, and also suggest novel means of diversion. In "PRACTICAL DRESS," JENNY JUNE discusses "FASHIONABLE FADS IN DECORATION," "WALKING HINTS," "RECEPTION GOWNS," "EVENING DRESS FOR GIRLS," "ARTISTIC HATS," "HOSIERY AND GLOVES" and tells the home dressmaker "HOW TO FINISH A DRESS." For the window gardeners what GEORGE R. KNAPP has to say about plants must prove timely. CHRISTINE TERHUNE HERRICK tells about the "EMPLOYERS AND EMPLOYED." MARIA PARLOA brings to the Kitchen Department a wealth of ideas for those interested in her subject. With poems by ROSE HAWTHORNE, LATHROP and H. G. HAWTHORNE and the Chat-box and Needlework full of good things, the December Housewife is a paper replete with holiday cheer, making one of the finest and choicest numbers ever issued.

The **Housewife** gives more for the money than any other publication. It entertains with the most delightful stories. It instructs by answering questions on all subjects interesting to its patrons. The most gifted writers in all the departments of social life. We cannot begin to tell you about it in this advertisement. One woman expressed it when she wrote to us: "Each number is so much better than the preceding, I don't know what you will do by and by." Send 10 CENTS for THREE MONTHS and learn how it is yourself.

N. B.—Mention FARM AND FIRESIDE, at the 1st, 10th, 20th, 50th, 70th and 100th persons answering this advertisement will each receive a year's subscription to either *Century Magazine*, *Harper's Monthly* or *Scribner's Magazine*, *Harper's Weekly* or *Harper's Bazar*, as you prefer. We do this to get you to mention FARM AND FIRESIDE. We want to find out how many FARM AND FIRESIDE readers buy **HOUSEWIFE**. If you should be entitled to choose one of these publications, you can, if you are already a subscriber to that publication, have your subscription begin when present subscription expires. Only TEN CENTS for THREE MONTHS.

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20 PAGES.

EASTERN EDITION.

VOL. XIII. NO. 6.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, DECEMBER 15, 1889.

TERMS (50 CENTS A YEAR.
24 NUMBERS.)

The Circulation of FARM AND FRESIDE
this issue is

250,600 COPIES.

The Average Circulation this year, or for the
24 issues since January 1, 1889, has been

240,650 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,200 copies, the Western edition
being 150,400 copies this issue.

Current Comment.

WE have received an official circular from the retiring commissioner of immigration of Dakota, denying the sensational reports recently sent broadcast over the country that thousands were on the verge of starvation in the two Dakotas. The commissioner claims that these sensational stories give the false impression that the two Dakotas enter the Union with their people in a starving condition. He says that this is unjust and unfair, and that it should be emphatically understood that every county has surplus enough to supply all the destitute within the boundaries of the two young states, so rich in resources and so confident of future power and greatness. The tables of crop reports accompanying the circular verify his statements. The commissioner says that destitution does exist in some districts where the people have lost two successive crops, but in most cases they are men who came poor in purse and unskilled in farming. The circular briefly but eloquently sets forth the magnificent resources of the territory that now leads in wheat production, and which, within fifteen years, has passed from a wide waste of bison-pastured plains to a prosperous community, with nearly all the advantages of modern civilization.

THE manager of the Kansas State Sugar Company, Attica, Kansas, has kindly sent us a report of this season's work. The factory in seventy-five days, running at half its capacity, produced 255,000 pounds of first sugars and 75,000 pounds of second sugars, and 70,000 gallons of molasses. A ton of cane made 100 pounds of sugar and from 10 to 15 gallons of molasses, the latter worth 15 cents per gallon and the former 6 cents per pound. The cane was bought from the farmers for \$1.50 per ton. The yield was from 12 to 15 tons per acre. Our readers can easily figure out the returns for themselves. The cane seed was used at the factory for fuel and furnished three-fourths the amount needed. This factory has the latest improved sugar machinery in use. The sugar is extracted by the diffusion process, and the evaporation done in vacuum pans. The entire cost of the plant was \$90,000. The four sugar plants in operation in the state this year produced nearly 1,500,000 pounds of sugar. There are now eight plants in the state and more will be built next season, although it is acknowledged that some of the plants failed to make any money this season.

The condition of the sorghum sugar industry is very well shown by the following extract from the recent

report of the Secretary of Agriculture: "The results of the experiments in Kansas have shown that in the extreme western portion of the state the season proved too dry for the production of a crop of sorghum cane suitable for sugar making. On the other hand, in the southern part of the state, west and south of Wichita, fine crops of sorghum cane were produced, and sugar made in such quantities as to foreshadow the financial success of the industry in those localities and in places farther south. The general result of the recent experiments in the manufacture of sugar from sorghum carried on by the department has determined the localization of this industry, in so far as financial success is concerned, in the region indicated above. If success attend the sorghum-sugar industry in the future, there seems to be reasonable ground for believing that in the southern part of central Kansas and in many parts of the Indian Territory, where the soil and climate are similar to that part of Kansas mentioned, it may especially flourish. There are, perhaps, also other parts of the United States where similar success could be secured, but these have not yet been pointed out."

HON. N. J. COLMAN, Secretary of Agriculture under President Cleveland, has had published some very interesting observations about his recent trip through England, as an agricultural representative on Scripps' league. The picture he draws of the condition of agriculture in England is far from a bright one. The farmers there are not land owners. They must pay a rent of from three to five dollars per acre, and when near cities, from twenty-five to fifty dollars per acre. In addition to the rent, they must pay taxes for various purposes, one tenth of what is raised going to the support of the established church. On account of cheap ocean transportation, they are unable to compete in the production of breadstuffs with other nations. In short, farming is unprofitable; times are hard among them, and they are emigrating in large numbers to America and the English colonies. About the only kind of farming that is now profitable in England is the raising of mutton sheep. Meat is high and the pasturage of that country, owing to its climate, is unexcelled. But already the farmers there are complaining loudly against the importation of American meats, as well as breadstuffs.

THE National Farmers' Congress, composed of over three hundred representative farmers, met in annual session the middle of last month at Montgomery, Alabama. Resolutions were adopted, urging that all agricultural organizations should combine to secure legislation favorable to farmers; asking congress to establish deep-water harbors on the gulf coast for the purpose of facilitating the growth of trade with Central and South American countries; approving the investigation being made by the government to reclaim the arid lands of the West; requesting further investigation by the Department of Agriculture into the causes of and remedies for swine plague;

asking for lower rates of postage on agricultural publications by the states; favoring the organization of a National Board of Agriculture; indorsing farmers' institutes and recommended that they be aided by the national government through the Department of Agriculture; favoring Chicago as the site of the World's Fair in 1892; favoring closer relations between producers and consumers; favoring a comprehensive system for the improvement of the Mississippi and Missouri rivers and the construction of a ship canal across Illinois, connecting Lake Michigan and the Mississippi river, and recommending that congress make liberal appropriations therefor; favoring commercial treaties discriminating in favor of the nations which accept silver as legal tender as well as gold, and against those that have demonetized silver. Resolutions introduced in favor of the repeal of the internal revenue laws; subsidizing steamship lines, the unlimited coinage of silver, and payment of bounties to sugar producers, were rejected. The resolutions adopted by the congress which have the strongest bearing on the political questions of the day are those on the tariff. They are very cautiously worded, but will cause much discussion. They are as follows:

Resolved, That while congress maintains the policy of a protective tariff we demand that all farm products shall be as fully protected as the most favored of the manufactured industries.

Resolved, That while as now a protective tariff is maintained which substantially protects importations of foreign carpets and many other articles of manufactured goods, we demand that the duties on mutton, sheep and wool of all kinds be so increased as to equally prohibit the importation of mutton, sheep and wool of every kind which can, under protection, be sufficiently produced at fairly remunerative prices in the United States to supply all American wants, including the best class of carpet wools, especially as carpets are luxuries and are entitled to less favor than farm and ranch products.

Resolved, That the tariff on wool imports to make carpets should at least be as high as that imported to make coats.

Resolved, That if protection to this extent be denied, we will call upon the farmers of the United States to assert their power at the ballot-box and otherwise to right this wrong and injustice of discrimination against them. If they fail in this, the wool and mutton producing industries will be so seriously crippled that they will be, in a large measure, destroyed and the farmers will no longer have any interest in protection for the manufacturers of woolen goods, but will insist that they shall have no larger measures of protection than is accorded to the wool industry, including any kind of wool.

Resolved, That the farmers of the United States are not called upon to support the nomination of any man for president, senator or representative in congress, who will not, to his utmost ability, aid in carrying out the objects of the foregoing resolutions.

A MICHIGAN subscriber kindly informs us that the organization of farmers in that state referred to in the November 15th issue of this paper is the Patrons of Industry, instead of Patrons of Husbandry, or Grange. The organization now claims a membership of one hundred thousand, and an increase of five hundred a month. It has a full line of stores, from grocery to drug store, and all goods are sold at a certain per cent

profit, according to agreement. The members claim that they were compelled to do something in self-defense against rings and monopolies; that, so far, they are doing well, and advise the farmers in other states to go and do likewise. The correction is cheerfully made. The remarks made apply to one organization as well as to the other. The new organization has the opportunity of becoming a very powerful and effective one, and of doing much good. Its principles and methods of doing business are well worthy of careful consideration by farmers and wage-workers everywhere.

PUBLIC sentiment is aroused against the exaggeration in engravings, colored plates and descriptions of horticultural novelties as found in the catalogues of seedsmen and nurserymen. It is a hopeful sign when a noted artist and engraver, whose art has been misused in the production of this exaggerated work, is forced by the strong drift of popular sentiment to disclaim all responsibility for his part in the abuse by publishing in his latest catalogue a card, in which appears the following:

I am opposed to making exaggerated cuts of horticultural subjects, and such cuts are never made by me unless especially ordered. I would much rather engrave directly from photos or drawings true to nature. We have now reached a stage where nature cannot possibly compete with art (?) in producing large crops, and it places competing customers as well as myself at a great disadvantage, besides lowering the standard of horticultural trade in this country. The evil, indeed, has become so great that I have been obliged to refuse such orders at a pecuniary sacrifice.

THE regular size of FARM AND FRESIDE is sixteen pages. This issue contains twenty pages. The increase is due to the demands of our advertising patrons for more space. Rather than encroach on the reading columns with advertising matter, the paper is enlarged to give ample space for additional reading as well as additional advertising matter. We believe all our friends appreciate our liberal policy of giving them more than was promised.

The paper will continue to be enlarged from time to time, according to the demands of our advertisers, but we wish new subscribers to bear in mind that sixteen pages is the regular size and what they receive above that is just so much extra, and not to think when it is again issued in regular size that it is being reduced.

ACCORDING to the November crop report of the Department of Agriculture, the average yield of corn per acre in this country for the past ten years is a little above twenty-four bushels. Now, how about the average grower? Does he, or can he, find any profit in corn culture? What kind of wages does he get for his labor in growing the average crop? Unfavorable seasons may account partly for this low average, but is it not mainly due to poor farming? There is one thing absolutely certain to the farmer, farming don't pay unless it is done well. The nitrogen alone in a corn crop of twenty-five bushels per acre, at its average cost in good commercial fertilizer, is worth over five dollars.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
MAST, CROWELL & KIRKPATRICK.THIS PAPER HAS BEEN ENTERED AT THE POST-OFFICE
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fully wrapped in cloth or strong paper, so as not to
wear a hole through the envelope and get lost.
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scriptions in sums less than one dollar.The date on the "yellow label" shows the time to
which each subscriber has paid.When money is received the date will be changed,
which will answer for a receipt.Discontinuances. Remember that the publishers
must be notified by letter when a subscriber wishes
the paper stopped, and all arrearages must be paid.
Do not fail to give your post-office address.When renewing your subscription, do not fail to
say it is a renewal. If all of our subscribers
will do this, a great deal of trouble will be avoided.
Also, give your name and initials just as now on the
yellow address label; don't change it to some other mem-
ber of the family; if the paper is now coming in your
wife's name, sign her name, just as it is on label, to your
letter of renewal. Always give your post-office address.

Address all letters to

FARM AND FIRESIDE,

Philadelphia, Pa., or Springfield, Ohio.

The Advertisers in this Paper.

We believe that all the advertisements in this paper
are from reliable firms or business men, and do not
intentionally or knowingly insert advertisements
from any but reliable parties; if subscribers find any
of them to be otherwise we should be glad to know it.
Always mention this paper when answering adver-
tisements, as advertisers often have different things
advertised in several papers.

Our Farm.

AGRICULTURAL CHEMISTRY.

From the Standpoint of the Practical Farmer.

BY JOSEPH (TUSCO GREINER).

No. 23.

SOURCES OF POTASH.—Among the sub-
stances that we might employ for the pur-
pose of providing our lands and crops
with potash are, first of all, the alkaline
salts imported from Germany, chiefly the
muriate (or chloride) of potash, sulphate
of potash and kainit. There is only one
mine now known where these manurial
salts are obtained, but the supply is said
to be inexhaustible. The story of its dis-
covery is quite interesting. It is more
than thirty years ago, when I stood on the
spot, and saw the piles of what was then
considered a poor quality of "cattle salt,"
and rather a "nuisance;" for the govern-
ment of the little principality of Anhalt-
Bernburg was then in search of the pure
rock salt, layers of which were supposed
to extend over the line to "Leopoldshall,"
from the great deposits at Stassfurt on
the Prussian side. The impure article,
however, continued to come, and no pure
salt appeared in sight. A chemist at last
discovered the true nature of the stuff
brought up from the bowels of the earth,
and then it was found what value there
was in the heretofore despised "cattle
salt." Factories were erected, the mined
product sorted, ground, and worked up,
and soon the "dung salts" were used to
quite an extent, especially also in En-
gland. The proceeds from these mines
were, for a long time, sufficient to cover
all the governmental expenses of the little
principality, and the people, for a number
of years, had the good fortune to be en-
tirely freed from state taxes. If I am
rightly informed, an English syndicate
these people want the earth, anyhow) have recently bought out the whole mine
system, paying more than a million dol-
lars for it.

From there we get our supply of potash
salts. One of these is the muriate or chlor-
ide of potash, which contains from 50 to 55
per cent of potash in a readily soluble form.
This potash is rated at 4½ cents per pound
by the stations, and a ton of the muriate
would therefore be worth about \$45 to \$50.
It usually sells for about \$40, and, hence,
we may consider it a cheap source of this
indispensable element of plant food. On
the other hand, it needs to be said that
this form also contains a considerable per-
centage of the somewhat objectionable
element chlorine, and that when applied
in excessive doses, it may do considerable
damage. A few years ago I applied muri-
ate of potash on a potato test plot of one

fortieth of an acre at the rate of 600 pounds
per acre, and for two years there was
hardly a sign of vegetable life to be seen
on that spot. The few potatoes that were
grown there in the two years were terri-
bly scabby and gnarly. This, however,
may have been an exceptional case; for I
have known even larger applications to be
made without ill results. For tree and
small fruits, this form of potash can safely
be used in almost unlimited quantities,
and in moderate doses, say from 100 to 250
pounds per acre, it will often give results
not noticeably differing those following
applications of a like quantity of the
much higher-priced sulphate of potash.
With the light we now have on the sub-
ject, it seems that for general farm and
orchard uses, muriate is by far the cheaper
source of potash of the two.

Sulphate of potash contains from 35 to
53 per cent of pure potash, and the latter
is rated at 6 cents per pound, making the
ton worth from \$42 to \$62. A high-grade
article containing fully 50 per cent potash
usually can be had for about \$58 or \$60,
and while it is a superior and safe form of
this element of plant food, I do not hesi-
tate to say that in ordinary cases I prefer
the muriate on account of cheapness.

There is still another form: the double
sulphates of potash and magnesium, in
which the potash is also rated at 6 cents per
pound. An average sample contains about
26 per cent potash; hence is worth about
\$31 per ton, and indeed, it usually sells
for from \$30 to \$35. I have had no prac-
tical experience with it.

Another form of potash we have in
kainit, and although this is decidedly a
low-grade article, it is nevertheless a most
important one in many respects. Its pot-
ash, of which there is only 12 or 13 per
cent, appears as sulphate and partly as
muriate. Kainit also contains common
salt, gypsum, chloride of magnesium, etc.
Its potash is rated at 4½ cents per pound,
and the value of kainit per ton should con-
sequently be placed somewhere near \$11.
It usually sells at about that rate, or very
little higher. At the mines in Leopold-
shall it can be bought for about \$4 or \$5
per ton, and the ocean freight is usually
very low. Fortunately also, Uncle Sam
does not levy an import duty on the farm-
ers' raw materials; so, at the seaports we
ought to be able to buy it at \$8 or \$10 per
ton when buying it by the cargo, as some
of our large potato farmers in New Jersey
are doing every year.

The valuable points about kainit have
only been half told, however. This salt
has the power to "fix" ammonia in a most
remarkable degree. I have taken consid-
erable pains to find out all the particulars
about this very thing, but only discovered
that modern chemistry does not yet dis-
close all the facts. Much of it is yet left
for further investigation, and the field
open for experiment in this direction is
yet a wide one. What appeared to me
most desirable to find out, was the com-
parative virtues of kainit and land plaster
(gypsum) as preservers of and traps for
ammonia. If the former has the same or
greater powers than plaster, it would add
to its value as a mineral manure (\$11 per
ton) the value of a like quantity of plas-
ter, when applied either as an absorbent
in stables, etc., or otherwise as a "fixer"
of the slippery carbonate of ammonia.
Plaster costs about \$5 or \$6 per ton, and if
its mission is performed—more than per-
formed—by kainit, when applied for its
potash, this kainit makes the use of plas-
ter unnecessary and thus saves an expense
of \$5 or \$6 per ton, which, added to the
manurial value of the kainit, increases its
aggregate value to \$16 or \$17 per ton. It is
like one hired man who does the work of
two, and consequently deserves not only
credit for two, but also the pay of two,
especially when he only eats for one. If
this is true, and I have every reason to be-
lieve it is, kainit is a most valuable ma-
nuure, cheaper really than any we have
come across yet, and one that I would
urge every farmer in need of potash and
plaster to use very largely. I have con-
sulted high authority in agricultural
chemistry on this varied subject, and in
my next will tell at what conclusions they
have arrived.

HALL'S CATARRH CURE is a liquid and is
taken internally. Sold by Druggists, 75 cents.

POULTRY ON THE FARM.

The average price of eggs in large cities
seems to justify the general impression
that the poultry on the farm is the most
neglected of all stock. A farmer will
stable his horses and cows, provide pens
for his sheep and pigs, and let the hens
shift for themselves. Now, for the capital
invested, there is no more profitable stock
than a good flock of hens; but hens, like
other stock, must be well cared for to be
profitable.

THE HEN-HOUSE.

For a house, almost any kind of a build-
ing will do. In the winter a loft will
answer the purpose, but there are a few
requisites that the hen-house must be pro-
vided with in order to secure success;
these are a tight roof—which insures a dry
floor—warm walls and glazed windows.
The tight roof can be made in the cheapest
way the farmer chooses, either shingles,
roofing-felt or anything that will effectually
keep the water out; the warm walls
can be made by lining them inside with
tarred felt or building-paper—and if this
can be so placed as to leave an air space
between it and the weatherboarding, so
much the better—and straw walls, made
by nailing laths or any old strips of
boards on the studding and filling in
tightly with straw. I like this wall better
than any other cheap wall I have seen.
The window should front the south or
south-east; two 3x6 feet hot-bed sash will
give ample light and sun for one house.
Cover the floor about a foot deep with
straw, leaves or any kind of litter, so that
the hens can scratch for their feed and get
needed exercise in so doing.

FEED.

The question of feed is one about which
hardly any two persons will agree, but I
have noticed one thing in all directions
given for feeding poultry, and that is, *give
them enough to eat*. A hen cannot eat
very much in one day, but when you have
a flock of fifty the amount of feed re-
quired is more than is usually supposed—
especially by the farmer who has been ac-
customed to throw a few handfuls of
grain to his hens and expects them to hunt
for the rest of their rations. When cold
weather comes all the feed the hens need
must be supplied to them in their houses;
if they are expected to pick up a good
part of their living in the barn-yard, they
will do so cheerfully, but you will not be
troubled to pick up many eggs. But, to
come to the kind of feed: Corn, wheat,
oats and buckwheat are the kinds of grain
found on most farms, and these—or two
or three of them—will be all that are need-
ed. The best advice I can give as to quan-
tity is to feed about all the hens will eat;
there can be no definite rule, as the quan-
tity will vary with the size of the hens
and the state of the weather. I feed but
twice a day, but aim to give them enough
in the morning to last till well on towards
evening, then I give them all they will eat
before they go to roost. At one time I
used self-feeding boxes, and kept them
supplied with corn. The hens did very
well, and I thought ate more than if the
feed was thrown to them daily.

MILK FOR HENS.

Hens require animal food of some kind,
and in winter pork cracklings make a very
cheap and good substitute for the summer
insects. Fresh meat from the butcher is
also good, but is more trouble to prepare,
and costs more. I give my hens skimmed
milk to drink during the whole year, and
to this I think I owe many of the eggs
laid.

PROFITS.

My "hen year" begins November first,
and I have just made up the account with
64 hens. The eggs and chickens sold and
used and the chickens on hand amount
to \$166.07; feed for the year, \$44.74; bal-
ance to credit, \$121.33; or \$1.89 to the credit
of each hen; or over a dollar profit on each
hen in eggs alone, after charging the hens
with the feed for themselves and over a
hundred chickens raised. This is not a
large showing, but it is given to encourage
others to make their hens a source of
profit and pleasure instead of loss and
vexation. Two dollars profit on each hen
can be realized by any one who will take
the time and trouble to care for them in
the right way. Then there will be no

complaint of a lack of eggs to sell or use.
The farm implements will not be decorat-
ed with valuable fertilizer; the garden
seeds will come up according to nature,
and not with the help of hens' feet (for I
take it for granted you will make a hen-
yard next spring); the old sow will miss
her share of spring chickens; the hunt for
eggs in loft, mow, stable and fence corner
will cease, and perhaps you may have
children who will get interested in poul-
try keeping—seeing that it is profitable—
and in a few years you may find that the
hen account is of as much importance as
that of any other product of the farm.

SUNDRIES.

Dry dust for the dry bath.

Pounded shells, bones, crockery, etc.,
for the grinding mill (gizzard).Cabbages (are the best), onions, turnips,
beets, or green rye for winter "pasture."
Kerosene emulsion or crude petroleum
for lice.

Roosts on a level, and near the floor.

Hens never allowed to go out in bad
weather.No nest-eggs needed; hens can't help
laying when the conditions are all right.No cocks needed when no eggs are
wanted for setting.

Clover hay for dry fodder.

A change of feed occasionally.

No "soft" messes required.

No "condition powders," no medicine,
no patent "egg food," no "nothing" but
the same common sense applied to the
hen as to the cow. A. L. CROSBY.

WHAT SHEEP RAISERS NEED TO KNOW.

Sheep raisers have need of some new
lessons in the business. Is it how to raise
wool? Is it how to breed Merino sheep?
These systems have been carefully stud-
ied. Admitting we have carried the grow-
ing of heavy fleeces beyond profitable
lines at a sacrifice of hardiness and use-
fulness, we grow good wool—no better
wool in the world. But there is too much
gum, grease and shrinkage in it to suit the
purposes of manufacturers. They would
just as soon buy wools in the grease that
would shrink fifty or sixty per cent as
wools that shrink seventy-five to eighty-
seven and a half per cent. In this ex-
treme shrinkage there is a loss, as named
above, for this twenty-five to thirty-seven
and a half per cent of shrinkage, which
cost the producer as much to produce as
the other part of the fleece. It cannot be
manufactured into any textile product.
It is mature. Fifty per cent of gum or
grease is sufficient to preserve the fibres of
the fleece in the regions east of the Missis-
sippi river, and all regions, excepting the
very dry or alkali regions of the West.
Dust and alkali consume the grease in the
fleeces, and unless there is a superabun-
dant of it, the fibres are damaged, made
brittle, unfit for entering into valuable
fabrics. It often is so weakened as to be
incapable of being spun unless mixed
with strong wools, to give it strength.

Gummy wools are strong wools. Gum
preserves the vitality of the wool: it pre-
serves the ends of the fibres—the outside
side of the fleece—from being frayed by
the winds, abraded by contact with trees,
weeds, bushes, fences and one another.
But enough is sufficient, and too much
that is unprofitable to the producer.

It has been universally agreed that the
manufacturer buys the sheep for its weight.
In other words, that the sheep
raiser gets pay for it. Let it be clearly
understood right here that the manufac-
turer buys on the basis of the scoured
fleeces. Her pay has been fixed, but does not
mean to buy what he cannot use. If he
errs, be well assured he himself is the gain-
er. He takes on more than his rights—
clean wool—but he is sure to get it, and
possibly more when he is lucky. The
exact amount of grease necessary to grow
in fleeces cannot be specified for any re-
gion. The handling of sheep varies the
amount. The character of the pastures
varies the amount. If sheep are pastured
on close sod, there is less dust than on fal-
low lands or open sods. If sheep are ex-
posed, in traveling to and from pastures,
or to dust in pastures, they need more
grease, since the dust consumes the grease
and the wool is dried and more liable to
break, split and become weak. Sheep
handled without sheds require more
grease in their wool than sheep housed

from wind and rain. Storms, by which the ends of the wool are dried, or the grease washed out by rains. It is certainly true that we, as wool growers, need to understand and observe these conditions as an economy.

Owners of stud flocks as a rule, breed for an overabundance of oil, grease and gum in their fleeces, that they may report big fleeces, and attract the attention of wool growers. With them it is a matter of business. The value of such a ram on dry, open-fleeced ewes cannot be gainsaid.

Much has been said against heavy, oily, greasy, gummy fleeces; nor has too much been said. But, in situations requiring extra oil, it is indispensable to the qualities of the wool; but in situations requiring less, it is an outrage upon animal vitality as well as a waste of feed. Many flockmasters have lost sight of clean, strong, white, soft, elastic, even wool, and given the greatest diligence to producing gum. It is a mistake to call such wool growing. It is time we abandoned such a system of sheep raising. It ought not to pay. This has much to do with manufacturers preferring the cleaner, imported fleeces to our home-grown wools.

LIGHTING AND VENTILATING BARN.

Farm architecture has made great progress in the last twenty years, but there is, in some points, considerable room for improvement.

New, tight barns are everywhere replacing the old ones with yawning cracks between the weatherboarding, but there seems to be no improvement in manner of ventilation. Although filled and emptied in the two hottest months, immovable, slat blinds and the open doors are the only ways provided for letting in air or letting out dust. In this state of the case, some drawings of improved blinds may be of value.

Fig. 1 shows a slatted blind of the usual kind, but constructed so that it can be opened when filling the barn or at threshing time. Usually, the slats are fitted in a frame that is nailed to the barn and are immovable. In the drawing, the slats and sides which hold them constitute a separate part that opens inward, letting in air to the full size of the opening.

In the drawing, A is the girt above the window; D is one of the studs forming the jamb or side of the window;

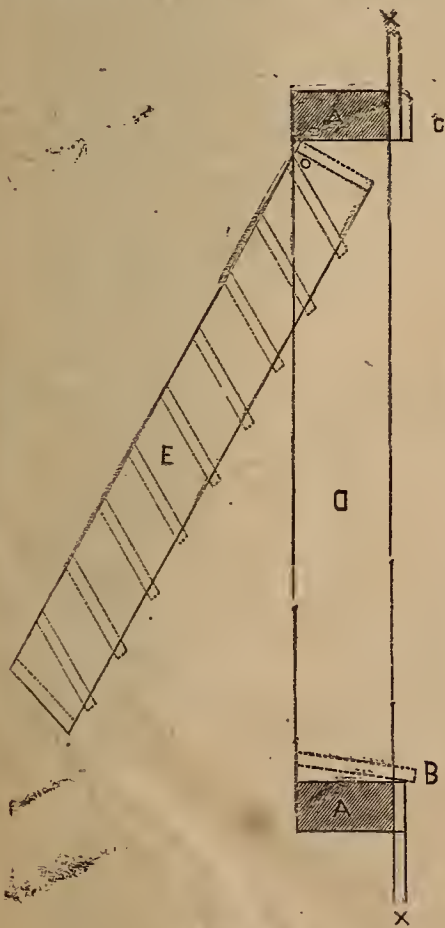


FIG. 1.

B is the sill, keeping water from the girt and boards underneath; C, the cap above the window; X, the weatherboarding. On each jamb the board projects one half inch into the window, and against this the swinging blind shuts. The side pieces to the blind, E, are one inch thick, and the slats are let into it one half inch, the slats being just as long as the opening is wide. The slats project one and one half inches from the outside of the side pieces, and when closed show one half inch out-

side the barn, presenting the usual appearance.

In case the barn is built with upright studs and patent siding, the siding is simply sawed out smoothly between two studs and the casing put on the outside in the usual way, only left projecting one half inch, for the blind to shut against. I have just made a blind of this style for the gable of a new barn.

Fig. 2 shows a simpler form of blind, made by sawing out two or more barn

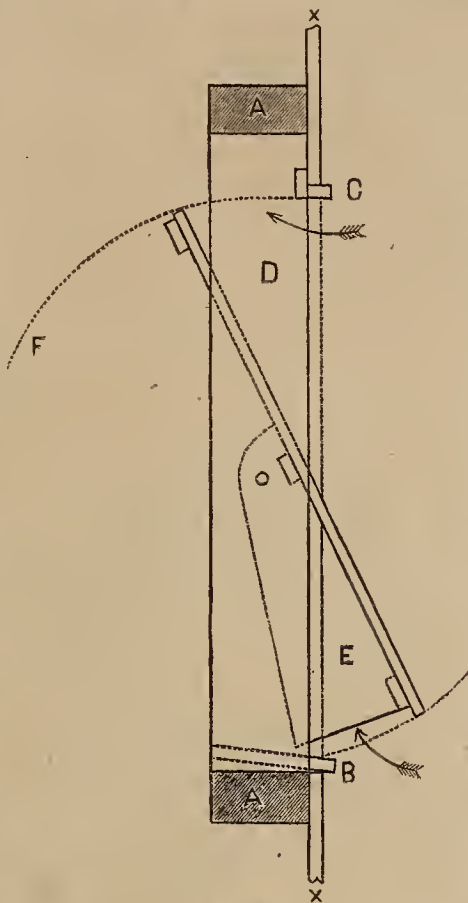


FIG. 2.

boards between two girts. A A are girts; X, the boarding, which is sawed across at C six inches below the upper girt, and at B just at the upper edge of the lower girt. The pieces sawed out are securely cleated to cross pieces, 1 by 3 inches, at each end, and to the edge of a 2 by 3 inch piece at the end. The lower and middle cleats are two inches shorter than the width of the blind or shutter, the outer edge of each side being cut out the thickness of the wing piece, E. This wing on either side is so that the shutter can be opened six or seven inches, and yet not permit rain to beat in, the upper portion being protected by the upright jamb or stud, D. The ends of the projecting siding at C are cleated to a light cleat, and a cap nailed underneath to shed rain from the closed shutter. There is also a sill at B. The shutter just fits between the uprights, and is hinged to them by a screw or carriage-bolt (without nut) passing through into the middle cleat. As will be seen, it can be opened the width of the wing, E, letting in light and air above and below, as shown by curved arrows, and still be storm-proof. If necessary, it can be opened half way in the direction of dotted line, and let in light and air to full extent of the opening.

Fig. 3 represents a fixed hood or wooden awning, letting in air and light at the bottom. The weatherboarding is sawed at the middle of a girt, and the lower ends of the boards above rabbeted to receive the weather-strip or rabbeted cap, C, which is the same as is used over dwelling-house windows. The awning boards are nailed under this cap at the top, and at the middle and bottom to cleats which are enough shorter to allow the side pieces, F, to fit underneath the awning. These side pieces just fit the side openings, and may be any desired width at the bottom, but six or eight inches are sufficient. If the girts are four feet apart, two boards, or two feet wide, is wide enough. E represents a board hinged to the lower girt and shutting onto the cleat, so as to close the opening in winter, if wanted. D represents a jamb or upright stud, which is not absolutely necessary in this case.

L. B. PIERCE.

INSECTS ON FRUIT TREES.

These pests are multiplying and every year their ravages increase. They destroy the apples, plums, cherries and peaches, yet they can be exterminated by judiciously spraying the trees. The Field Force Pump Co., of Lockport, N. Y., have just published a very instructive treatise on this interesting subject, which they will send free on application.

AMERICAN POLLED DURHAM ASSOCIATION.

The breeders of polled Durhams met at the Grand Pacific, Chicago, Ill., on November 14, 1889, and organized the "American Polled Durham Association." The meeting was harmonious, and the following officers were elected for the ensuing year: President, Wm. W. Crane, Tippecanoe City, Ohio; Secretary and Treasurer, A. E. Burleigh, Mazon, Illinois; Executive Committee, Salem Clawson, Clawson, Ohio; A. C. Millor, Elmore, Ohio; J. F. Burleigh, Mazon, Illinois.

MEAT INSPECTION.

Rumors of cattle diseases in this country, having little foundation, if any, in fact, continue to be widely circulated in foreign countries, to the great injury of our cattle trade. The existence of a demand for our surplus meat products in these countries is nevertheless plainly evident, and it is in the highest degree desirable that the government of this country should adopt all means in its power to secure for our producers every opportunity to compete on fair terms in the markets of the world for the disposal of their surplus production. I would therefore insist most strongly upon the necessity of such a national inspection of cattle at the time of slaughter as would not only secure the condemnation of carcasses unfit for food, if there be any, and guarantee the accepted product as untainted by disease, but which should enable the national authorities to promptly discover any cattle-disease centers, thus putting it in the power of the department to take immediate steps for its control and eradication.

While earnestly repudiating the capacious objections made on the part of foreign authorities to the wholesomeness of our meat products, still, as long as we neglect to take the precautions universally adopted by the governments of those countries in which we seek a market for these products, and leave it to the officials of other countries to inspect our live cattle or our meats, it is impossible for us to present as forcible arguments as we could otherwise do against restrictions on our trade, these foreign governments claiming, with some show of reason, that they have better opportunities for learning of disease among American cattle than are enjoyed by the American government itself. It is time to put a stop to this anomalous condition, and I therefore earnestly recommend such an amendment to the law under which the bureau is at present organized as will provide for such official national inspection as shall guarantee the fitness of our meat products for food consumption under the seal of the United States government.

In connection with such amendment, I would also suggest that it be made adequate to cover such an observation in, and supervision of, the great meat markets of this country as will permit this department to supply the stock raisers of this country reliable information as to the character of stock commanding the highest prices. I conceive it to be of the greatest practical value to stock raisers and farmers to know definitely what are the precise attributes which procure a price for certain kinds of stock far above the average, and whether the effect of such

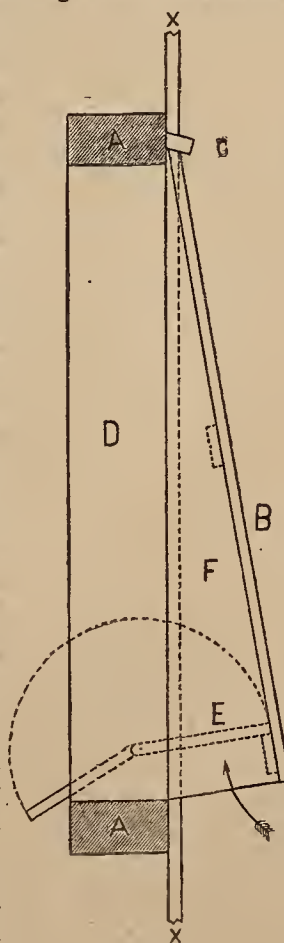


FIG. 3.

characteristics as weight, age, and quality, etc., upon the price, vary with different seasons of the year. In a word, I desire that the Bureau of Animal Industry be enabled to supply to the farmers such information relating to their industry as it is impossible for them to obtain by their own unaided efforts.—*Report of Secretary of Agriculture.*

SHEEP AND WOOL.

The importance of sheep husbandry demands the especial consideration of the department at this time. The economics of breeding and feeding, with reference to a growing branch of the meat supply, requires the aid of scientific experiment and practical skill to produce the largest equivalent of flesh for the feed consumed.

The rapid increase and consumption of mutton is indicated by an enlargement of the receipt of sheep at Chicago and St. Louis, from 544,627 in 1875 to 1,971,683 in 1888. The increase in New York during the same period amounts to 750,000.

A canvass of the principal cities of the country would evidently show that consumption has doubled, a rate of increase twice as rapid as the advance of population. The healthfulness of mutton, its suitability for summer use in warm climates, and its growing popularity as highly-fed animals of the best mutton breeds become more common in our markets, contribute to the rapidly enlarging demand. It is important that this branch of sheep raising should receive greater attention.

The wool industry probably represents \$300,000,000 per annum, and the native wool product is four times as large as in 1860, while the average fleece weighs as much as two of that date. Prior to that time there was a slow increase of numbers and small advances in quality or weight. Large classes of goods which could not be produced in this country, as was claimed by importers and half believed by consumers, are now produced here in nearly full supply of the home demand. Their manufacture was rendered possible first by the effects of the war premium on gold and afterwards by the influence of the tariff of 1867.

The result of this development has been that growers have received hundreds of millions of dollars which would otherwise have gone to the Argentine Republic, Australia, and other countries. It has created a reliable supply of home-grown raw material for our manufactures, and an even and better quality of wool than that handled by nations depending on the growth of all climates, a better average quality of goods than those of foreign manufactures, and a steady reduction of price through competition.

I respectfully call your attention to a fact full of significance in this connection. There has recently been serious interruption to the prosperity of wool growers. Since the reduction of the tariff of 1883 the number of sheep have apparently been reduced about seven millions, and the importation of wool has increased from 78,350,651 pounds in 1884 to 126,487,729 the past year. Upon the sheep and wool industry of this country the burden of that loss has fallen, while our manufacturers have contributed so much additional money to foreign markets. Wool growers are despondent in view of low prices of wool, and their interests are threatened in consequence.

On behalf of this industry I commend these facts to you, and should they be submitted to Congress I ask for them intelligent and careful consideration.—*Report of Secretary of Agriculture.*

HOW HORSES SHOULD BE FED.

Bearing in mind that the stomach of a horse is small in proportion to the size of his frame, he requires feeding often, and, though three times a day is sufficient, four times is better. Unlike human beings, horses should drink before they eat, because, owing to the conformation of the horse, water does not remain in the stomach, but passes through into a large intestine called the cæcum. If a horse be fed first, the water passing through the stomach would be likely to carry with it particles of food, and thus bring about colic. Whatever a groom may say, let a horse drink just as much as he likes. If he be watered four times a day he will never take very much, or too much. A horse, it must be remembered, is fed on dry food, and this, with the strong work done, produces a feverishness which a sufficiency of water tends to allay.—*The American Breeder.*

Our Farm.

GARDEN GOSSIP.

BY JOSEPH.

BUSH LIMAS.—One of my friends of the FARM AND FIRESIDE family reminds me of my promise to tell something more of Henderson's bush Lima bean. My well-considered opinion is, that we have in it a valuable and interesting variety, altogether different from anything we have had in bush beans heretofore. In pod and bean it is exactly like the old small Sieva, but it makes a compact, stout, upright bush, with peculiar, firm, leathery foliage. The peduncles are very numerous, and on good soil crowded with pods, which contain usually four beans each. I consider the variety prolific, and interesting enough to desire planting it more largely next season; yet, in quality, it is hardly equal to the large Lima, and the small size of bean makes it less convenient to prepare for the kettle—a fact of especial importance to the good housewife. I do not think that the large pole Lima is in any danger of being placed on the retired list by a rival like Henderson's bush Lima. If we could have but one of the two, I would much quicker part with the latter than with our old running variety. There can be no doubt, however, that the new bush sort has come to stay. But it should not be planted very early. If we wait until the ground has become thoroughly warm, and all danger of late cold snaps is past before planting it, so it would not receive a setback when it should be growing right along, the Henderson bush Lima will give us a few messes of beans before we could expect to have them from the pole sort.

The Kumerle bush Lima, introduced last season by Thorburn & Co., of New York City, is a dwarfed form of the well known and excellent Dreer's Lima. Like this, it grows comparatively small pods, but the beans, although appearing small, fill up well on account of the plumpness, which distinguishes them from the true Lima. This also is an interesting variety that has come to stay.

Now, to cap the climax, comes the firm, W. Atlee Burpee & Co., of Philadelphia, Pa., with a true bush Lima bean, and from what I can learn about it, it possesses all the good qualities of our old, large Lima without its running character. Parties who have seen it tell me that it has strong, stiff branches, forming a bush about 18 inches high, with large and firm foliage. The plant usually contains from 20 to 50 pods, and these are as large as those of the large Lima. As to its origin, I learn that the first plant was accidentally discovered in a large field of pole Limas in Chester county, Pennsylvania, six years ago. The permanency of the strain seems to have been firmly fixed from its very start. Unfortunately, the past season has been very unfavorable to the ripening of the seed, and only one third of a full crop was obtained, so that the introducers have thought it necessary to put what they consider a prohibitory price on it for next spring; namely, 75 cents for the packet of four beans. This is said to be the highest price ever asked for any novelty; but I am sure that there are thousands who will not consider this price prohibitory, or get scared by it—among them the humble writer. In anticipation, I already enjoy the privilege of seeing and watering Burpee's big bean on my grounds. Perhaps I will also compete for one of his premiums for most productive plant, although I hardly ever care to engage in a contest of this kind. My order for a package of seed is already on the desk before me, ready for mailing.

Perhaps some of my readers will think that now, since we have all these excellent bush beans, I shall give up the old Lima. Not by a long shot. The pole Lima bean is going to stay, too. My wire trellis, used in place of poles, adds an ornamental feature to the garden that I do not care to miss. Then it is much more convenient to pick the pods off from the trellis than from the ground. The Extra Early Jersey Lima bean will find a place in my garden for many years yet, I expect.

BIG YIELD OF ONIONS.—I have set my heart on growing one eighth or one quarter acre of onions, at the rate of 2,000

bushels to the acre. It seems a big undertaking, but I think I can accomplish it in an average favorable season. About a year ago I made favorable mention of the Prize-taker onion, then newly introduced by Wm. H. Maule, of Philadelphia. I described it at the time as the equal in appearance, size and quality to the imported "Spanish" onion of our groceries and fruit-stores. After growing it another season, I have nothing to take back now. It has again done far better than any of the "mammoth" and "giant" sorts ever introduced. The variety may be a little late for the extreme north; perhaps my soil was a little too heavy, especially in this terribly wet season—in short, the necks were larger than of those I grew the year before in New Jersey, on sandy soil; but there they were only as thick as a lead pencil, and on maturing had entirely disappeared. Here they were large enough to require the use of a knife; still, the bulbs cured nicely, and came out in all their natural beauty. In spite of this season's drawbacks, and many unfavorable conditions otherwise, my little patch yielded at the rate of over 1,000 bushels per acre.

To double this yield will require some very judicious feeding on suitable soil—giving the plants all they can utilize without injuring them by too copious applications. Concerning the method of planting, however, I have yet a little secret of my own. This is fully explained in my work, "How to Make the Garden Pay," now in press, and after its appearance I will tell about it in these columns.

The onion crop this season brings quite a fair price. Last year thousands of barrels spoiled for want of purchasers willing to give anything for them. I think that an average crop in an average season can hardly be considered profitable. Yet it is the same thing as with almost any of our common farm crops. The large crops pay well enough, and it does not require so very much ingenuity and good management, either, to obtain yields that are far above the average. As a rule, there is not much money in onions unless you can raise very nearly 800 bushels or upwards per acre.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

GATHERING AND PRESERVING NUTS.

Butternuts, hickory nuts and pecans, if wanted for use in winter, are to be stored in a dry, cool place. The husks of the pecans do not usually peel off and leave as bright and clean a surface as the common shellbark hickory, and to improve their appearance the nuts may be placed in a barrel, a little sand added, and the barrel rolled about until the shells are finely polished. Barrels are sometimes arranged with a bearing fastened on each head and a crank attached, to turn them by hand in polishing the nuts. An opening is made in the sides to receive the nuts and sand, this being closed with a hinged flap or sliding door. Very thick-shelled pecans or hickory nuts may be readily ground down with sand to almost any required thickness by this means, and quite rapidly.

The common American sweet chestnut is far more delicate as well as better flavored than any of the foreign varieties, but it is rarely preserved in a fresh condition for eating during the winter, probably because few persons know how. It is not at all difficult to preserve the nuts for months, and in as fresh a condition as when first gathered in the fall, simply by packing them away in clean sand and storing in a cool place, such as the north side of a building, or burying in a dry spot in one's garden. When chestnuts are to be preserved, either for use during the winter or for planting in the spring, they should be spread out upon a tight floor in some shady, cool place where they can be turned over daily for a week or two, and at the end of this time nearly all the grubs in the nuts will have crawled out and be found wriggling about on the floor underneath. By raking the nuts to one side, the grubs may be readily swept up and burned. The nuts may now be assorted, all the damaged, weevil-infested and withered ones thrown out, and only the sound and plump ones saved. These

should be mixed with an equal bulk of clean, sharp sand and placed in well-drained boxes of convenient size for handling. If the nuts are desired for eating during the winter, then small boxes, or, what is better, flower-pots large enough to hold two to four quarts of nuts, are preferable to those of larger size, because a few days' supply of nuts can be taken out without disturbing the entire stock. The boxes and pots should be stored, as we have said, where the nuts will keep cool, and if frozen it will do them no harm. But if wanted for use during the winter, the storage pits should be so arranged and located that they can be opened without inconvenience during the coldest weather. An ordinary hot-bed frame placed on the north side of a building or large evergreen tree will be found very convenient for this purpose.—*Orchard and Garden.*

EXPERIENCE WITH CHICASAW PLUMS.

Several years ago we purchased trees of the Newman, Langdon, DeCaraduce and Wild Goose plums. DeCaraduce has borne a few nice plums, the bulk of the fruit falling off when about the size of peas. The curculio finds them, and the tree, large and thrifty as it is, must go to the wood pile. The Wild Goose trees are now of good size, four inches in diameter, but scarcely a plum will they bear. This is the case among all those, except one, I have seen in this and several other states. About seven or eight years ago we inserted cions of the named varieties in the top of a larger plum tree, but with no better success. A neighbor has a beautiful row of Miner plum trees, but he is discouraged with them, and grafted them with the best European sorts. From what I have seen, they seldom bear in the eastern and sparsely in the middle states, when removed from their native soil in woods and along fences. Even in Illinois and eastern Iowa they are often barren of fruit. Growers in New Jersey tell me that Bassett's American is also unproductive.

Long Island, N. Y. ISAAC HICKS.

At a meeting of several prominent Minnesota horticulturists, a short time since, I asked for opinions on the Miner plum, and all spoke against planting it, the opinion being that it did not fruit once in five years, and then the fruit was so small in size and quantity that it was almost worthless, and could not be compared to varieties originating from our native plum (*Punus Americana*). The tree is perfectly hardy, and grows well, but it seems to belong farther south. I have for several years had the Miner near to several other varieties of plum, but they have done absolutely nothing, although blooming freely. It may be that when just the right pollen is produced by other varieties, at just the right time, and during pleasant weather, that we can fruit it abundantly; but I think the blossoms too weak in some directions for not only fertilizing each other, but to receive pollen from other varieties, except under the most favorable atmospheric conditions. S. B. G.

DRIED JAPANESE PERSIMMON.

Very few people, says the San Francisco *Chronicle*, are aware of the fact that the Japanese persimmon, when dried, is one of the most delicious fruits imaginable. Those who are acquainted with this fruit know that it must be fully ripe when picked, otherwise the flavor will not be what it should. But the perfectly ripe persimmon is difficult of handling without damage, and therefore considerable loss is apt to result. Experiments made, however, show that the Japanese persimmon may be dried as readily as a fig, which, indeed, it resembles in appearance after being cured. The dried persimmon has a very meaty, pleasant taste, and will, undoubtedly, as soon as its excellence becomes known, take a prominent place among table delicacies. The persimmon ought also to make a very acceptable *glace* fruit, and a good profit awaits the man who shall take advantage of these hints and prepare this product for market in pleasing shape.—*Pacific Fruit Grower.*

In attending a Shorthand school the expense of living is a large item. Rates of living in Oswego, N. Y., are very low. Apply to W. G. Chaffee for particulars of both school and board rates.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Japanese Persimmons.—L. N., Md. Plant your persimmons about twenty feet apart each way. The climate you are in is pretty cold for the Japanese varieties.—Your plum trees were probably covered with some aphids. Spraying with the kerosene emulsion mentioned in these columns, or with tobacco water, made by boiling tobacco stems or leaves in water, and used the color of strong coffee, will remove them.—Chestnut trees, when grown for profit, should be cultivated at least while young, and will repay the extra care.—Please send specimen of diseased twigs on your apple trees.

Flemish Beauty.—P. E. W., Chester, Vt. Flemish Beauty pears have cracked so badly that they have been discarded by most growers. It is a variety much more liable to this disease than most pears. If your trees stand in sod or poor soil, manuring may improve the fruit, but your best plan is to graft the tree with some more desirable kind, such as Beurre d'Anjou or Lawrence.

Celestia Apple.—G. S., Lamoille, Minn. The Celestia originated with L. S. Mott, of Miami county, Ohio. Its season is October, and it is recommended as a good apple for amateur growers in that locality. Probably most any of the Ohio nurserymen can supply you with trees.

Apple Blight and Grape Rot.—J. A., Jonesboro, Ind. Your apple trees are affected by what is commonly called "blight," and your grape vines by the "grape rot." These diseases are common throughout your locality, and do much damage. They result from the plants being attacked by fungus growths, each plant being injured by its own peculiar fungus. These fungus growths act on the foliage and fruit in a manner very similar to the action of rust and smut on wheat, with which you are doubtless familiar. They feed on the juices and tissues of the plants until they ripen their seed, or spores, by which they spread themselves. There is no practical remedy for apple blight. The diseased wood should be removed and burned at once, on its showing any signs of disease, and care should be exercised that the trees grow healthily, but not too vigorously, for a soft growth predisposes to disease.—Grape rot, however, may be successfully prevented by the application of Bordeaux mixture, made as follows: Dissolve eight pounds of sulphate of copper in five gallons of water, and at the same time slack ten pounds of quicklime in twenty gallons of water. When cool, mix together. With this preparation spray the vines from three to five times during the season, commencing when the young growth is from five to twelve inches long. A very fine spray must be used, that the mixture shall be evenly distributed. There is no danger from the application of this if not applied for two weeks previous to harvesting the crop. The application of wood ashes would probably aid in developing a healthy growth, but could not directly prevent the diseases.

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Conducted by P. H. Jacobs, Hammondon, New Jersey.

EXPOSURE AND VENTILATION.

The great craze among poultrymen is ventilation. Just why one should attempt to ventilate in winter is a mystery, yet a large majority of those who are attempting the poultry business pay more attention to an attempt to ventilate than to anything else. Thousands of chicks in brooder-houses are annually destroyed by ventilation. We recently inspected a brooder-house containing 1,500 chicks. They were the finest and best we ever saw, and were doing well. The owner imagined that the house was not sufficiently ventilated, so he let in the "fresh air." There was no perceptible draught, but the chicks were affected, 600 of them dying. He could not have killed so many had he tried to do so with the house closed. Keep young chicks always warm and comfortable. You cannot keep out the fresh air unless the house is hermetically sealed.

EXPENSES OF KEEPING POULTRY.

When we are asked if one can engage in the poultry business and make it pay, we find it impossible to give a satisfactory reply, as the question is one that permits of two constructions. If it is made a business, the poultryman, to give it his whole attention, must do enough business to at least pay for his time. Just how many hens he should keep to do this depends on his necessities, but should he fail to keep a sufficient number to occupy his whole time he will lose, not through any lack of opportunities of deriving a profit from the hens, but from omitting the most important matter, that of cheapening his labor by bestowing it to the best advantage. On the other side, a few hens will pay because the labor given them is not taken from any other pursuit. The large flocks entail expense of labor while the small flocks cost nothing in that respect.

PET STOCK FOR PROFIT.

Pet stock affords pleasure to children (and also to parents), but when the pet stock can be made to afford profit as well as pleasure, it is an advantage. If a boy or girl is induced to take an interest in pet stock it should be with an object in view—to make it pay. There may not be any large profits derived, but even a small prospective gain induces the little one to take greater interest, as the desire to produce something, and be as independent as possible, is as strong in the child as in the adult. It also induces the keeping of accounts, strict attention to business, and close application to all the details of management. No child is as elated, proud and exultant as the one that has, unaided, realized a small profit from some source within its reach, and children should be encouraged in that direction. The most profitable pets, and which afford unbounded pleasure, are the Bantams, and every child should have a flock.

FEEDING DRY PROVENDER TO FOWLS.

Any material that can be cut up and fed to animals may be fed to poultry, only the material should be cut into very short

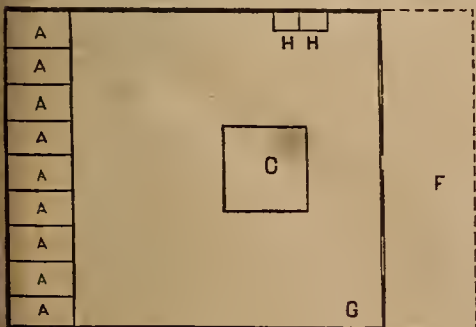


FIG. 3.

lengths (not over half an inch), and then scalded or steamed. If corn-stalks and corn-fodder be cut fine, and at the same time crushed, the duck and goose will eat such cut food with avidity. Such being the case, there is nothing to prevent the farmer from feeding cheaply, instead of giving grain exclusively, and thereby getting the fowls in a condition too fat for the purpose of laying. Coarse food also assists diges-

tion and provides a variety. The fowls are just as partial to bulky food as are animals, and they will thrive all the better if provided liberally with it.

A COMBINATION POULTRY-HOUSE.

Mr. Charles W. Miller, Harrisonville, Mo., sends an excellent design of a poultry-house, which he claims can be built for \$12, and describes it as follows: "I compiled it from a number of designs, and I think it combines the best points into one house. It is battened outside, lined with tarred paper or common felt, and battened inside on the paper. The advantages of this house are cheapness and arrangement.

"Fig. 1 shows the elevation, with front side closed, for cold weather. The upper window is a sash with 10x12 lights, and

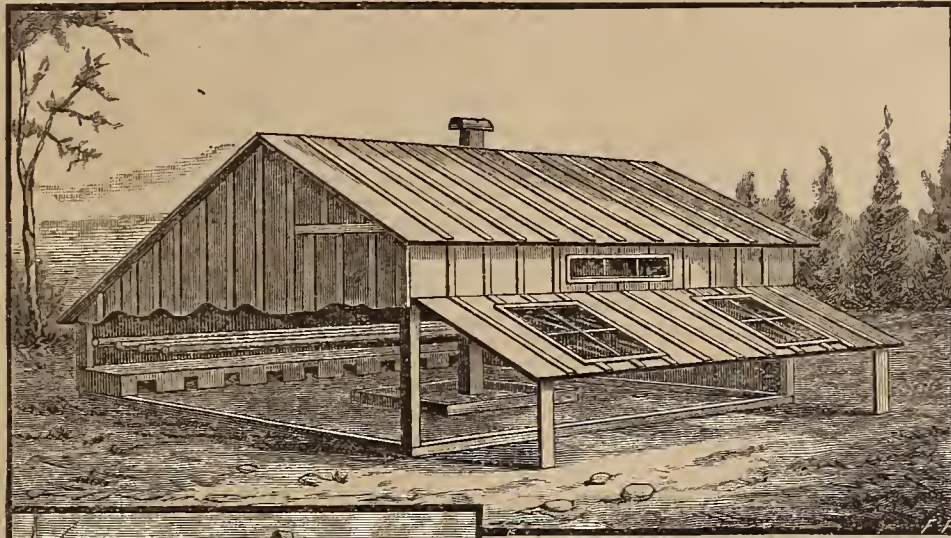


FIG. 1.

the lower windows have lights 10x14 inches. The small door is 8x12 inches, or as may be preferred. The door is 2½x6 feet.

"Fig. 2 shows the summer house, with front side raised two feet high, which adds more floor under cover, as well as rendering the house cool in summer. The door and a portion of the end of the house is removed, to show the arrangement of the roosts and nest boxes.

"Fig. 3 is the ground plan, showing place of nests (A A A, etc.), dust-box (C), bone and gravel-boxes (H H), and door (G). The nests are 12x24 inches, the dust-box 3x5 feet, and the bone and gravel-boxes each 6x12 inches. F is the portion of the roofed space, 3½x12 feet. G is the entrance door.

"Fig. 4 shows a transverse section of the house, with the roost shade or cover (D), which can be turned partly back to clean the roosts, the position of the ventilator (C), and manner in which the front (F) turns up. Roosts (E) are to drop into notches, so that they may be easily removed to clean. The ventilator-tube is 6x6 inches and made of boards. The floor of the house is 12x12 feet."

The plan of the house is excellent, and allows of a large space on the floor as well as permitting of plenty of light and ventilation.

BUMBLE FOOT.

We are asked a cure for bumble foot. It is usually the result of the birds being compelled to jump from a high perch, which bruises the bottom of the feet, especially if the floor is hard or gravelly. The cure depends on the nature of the injury. Sometimes the removal of the birds to a place littered with hay—no roosts—will effect a cure, and again an abscess may be formed which will require the ordinary treatment in such cases. To prevent the difficulty, make the roosts low.

THE HENS IN THE MANURE.

The hen is an excellent agent for scratching and working over the manure, and she will find many dainty morsels therein that would be of little value otherwise. It pays to allow the hens to scratch over the manure, as they can reduce it fine much better than it can be done in any other manner, and they will thereby keep in exercise.

DOUBLE-YELKED EGGS.

Double-yelk eggs are not desirable. Although a double-yelk egg is a matter of rejoicing, and the hen that laid it considered one that performs doubled duty, yet it indicates that the reproductive organs are in a diseased condition, in a majority of cases the hen being too fat. Very small eggs may be laid by a fat hen for awhile, when she will suddenly lay one with two yolks, or a small egg incased in a larger one, to say nothing of other freaks, all of which are due to the hen being out of condition.

EXERCISE ON THE RANGE.

There is something more derived from the range than the food. It is exercise. The fowls that forage well are seldom sick. If those in confinement can be

made to exercise it will be an important advantage, and there is no reason why it cannot be the case. It should be a rule never to feed fowls in any manner other than to compel them to work and scratch for all they receive, and the benefits will be shown in a short time.

LIME AND ROUP.

Finely powdered air-slacked lime, freely dusted on the walls and floors of the poultry-house, is the best preventive of roup, and better than whitewash for disinfecting the premises. It also assists in drying the interior, by absorbing moisture, and a lump of lime in the drinking water will also be of advantage.

IRON TONICS.

Some writers are urgent in recommending iron in some form as a tonic for poultry, and advise the use of copperas or Douglass mixture. If iron is used, add a teaspoonful of citrate of iron and ammonia to each quart of drinking water. It is harmless, beneficial, and costs but very little.

THE RYE PATCH.

If you followed our advice and sowed rye for winter use, let the hens have free access to it, in order to keep it down. Rye for poultry should not be allowed to grow,

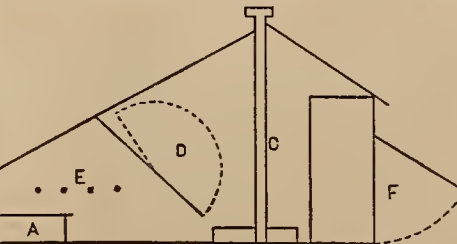


FIG. 4.

but should be kept short. The more it is eaten off the better it will be for the hens during the winter.

CORRESPONDENCE.

DOES POULTRY KEEPING PAY?—If a man goes into any business and expects to make a success, he has to put forth some energy, and with most farmers the fowls are a nuisance simply for the want of proper management. The farmer likes his fresh eggs for breakfast, and good, fat chickens for dinner, but is not willing to prepare a place for the poor hen. She is compelled to roost on the fence, or some old wagon, or wherever she can. She has to steal her feed and also her nest, and if you happen to find it with a nest full of eggs, or if she steals away, sits, and comes up with ten or a dozen chickens, then she is a good hen; but if some dog or skunk finds her nest first, and destroys its contents, then you will say she is a worthless hen, and has not laid an egg during the summer. Now, two thirds of the farmers will tell you that hens do not pay, just because they do not know there is such a large per cent of eggs and chicks destroyed. I am a farmer's wife, and I claim that, with the same amount of care and one half the capital, there is more money in hens than in anything else on the farm.

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CROP ROTATION.

In a rotation commonly adopted in northern and eastern states—and which may serve as a basis for other rotations, and be modified with locality and circumstance—corn is planted on inverted sod, enriched by spreading barn manure upon it the previous autumn and winter. The rains and melting snows dissolve the soluble portions and carry them down into the soil, thus effecting a more perfect diffusion or intermixture than could be effected mechanically by spring application, and giving decidedly larger crops. A fine, mellow bed of soil is easily prepared for planting the corn by using the disc or the smoothing harrow on the inverted soil. The latter half of autumn will be required for harvesting and husking the corn and for removing the stalks. The corn is followed by spring wheat, oats, peas, or any spring grain which may be sown early. After removal of the spring grain, the land is thoroughly prepared for winter wheat by cultivation and pulverizing, and by addition of any manuring which may be advisable. Timothy, or other hardy grass, is sown with the wheat and clover early the following spring. A fine growth of grass is thus provided, immediately following the harvesting of the wheat. If two or three years, or more, is desired for meadow and pasture, the meadow should occupy the first year, or until the grass has become well established and the soil hardened for the admission of domestic animals in pasture. The second or third year in grass will give a good sod for corn at the beginning of the next course in the rotation.

There are several variations which may be introduced as circumstances require. Potatoes may occupy a portion of the corn field, or part of the land, instead of oats, the year afterward. If dug early in autumn, they may be followed with winter rye, sown as soon as the potatoes are dug, and if the ground has been kept in good condition and clear of weeds, the only cultivation to precede the sowing of the rye will be the use of a disc harrow. The rye crop may have four uses—early spring pasturage, cutting for early soiling, ripening for grain, or turning under for green manuring. The rye may take the place of winter wheat, and is the best crop for seeding with grass, being the last grain in the course. If sown after potatoes, it fills a vacancy by growing through the rest of the autumn and on in spring until cut for soiling or for ripening grain, as the owner may desire. In sowing timothy with winter wheat, it sometimes happens that on very rich ground, and followed the next spring with much rainy weather, the timothy will make a rank growth and ripen seed by the time the wheat is harvested, and, at the same time, lessen the crop of wheat. This may be prevented by sowing the timothy seed two or three weeks later than the sowing of the winter grain. The Indiana friend whose queries prompt this article will perceive that by adopting the above mentioned crops, in such course as he may prefer, he will find no difficulty in occupying the ground through successive years with such crops as he has named, the only vacant periods being the few weeks required between them in making a suitable preparation for each succeeding one by thorough tillage.—*Cor. New York Tribune.*

THE VALUE OF FRUIT TREES.

"A good fruit tree is worth fifty dollars," we heard an old farmer say recently. If this is true, an orchard of one acre containing fifty trees should increase the value of the farm upon which it is situated by the pleasant sum of \$2,500—less, of course, the original value of that individual acre. While it might be difficult to find a purchaser who would accept this valuation, my own experience inclines me to the belief that the farmer's assertion was not far from right. A money yield of three dollars per annum from each tree would give six per cent upon his capitalized value. It is a poor tree that will not average this, even allowing for off years, and off years are not so frequent as to alternate regularly with the bearing ones. A healthy tree, properly

cared for, will give a crop two years out of three that will pay for harvesting. Occasionally a tree will give a crop that will pay the interest for many years in one.

An Early Richmond cherry tree paid me, last year, eight dollars, besides the fruit used at home, which was sufficient to pay entire cost of gathering. From a sweet cherry tree this year I sold three and one half bushels at two dollars per bushel.

Two Chickasaw plum trees, growing so closely together that their branches intertwine as if they were one tree, the two covering a space of about five hundred square feet, frequently pay ten dollars in a season, which would be at the rate of over \$800 per acre. A pear tree near by yields ten bushels in a good season, and one dollar per bushel is not an unusual price. Three early apple trees this season gave over fifty bushels, which sold at from eighty cents to \$1.20 per bushel. The trees were so full that I had to commence picking while yet very green, to save the limbs from breaking. Yet, the same trees last year gave a crop that paid more than six per cent upon a value of fifty dollars each.—*American Agriculturist.*

PREPARING FOR A LAWN.

In order to have a good lawn quickly in a dry soil, the ground must be enriched and well plowed. To avoid weed seeds, this enriching had best be done with ground bone, sown on the furrow at the rate of eight or ten pounds to the square rod. Along with this, either good wood-ashes, in about double the quantity, or muriate of potash, in the same quantity, is necessary. It is worth taking considerable time and trouble, when preparing to seed, to get the ground level, or evenly graded, as depressions are not only unsightly, but as they collect water they are usually weedy spots. After plowing, harrow well, sow the seed and "board down" the surface in the ordinary way in which gardens are smoothed for fine seeds. Then keep off the surface until the grass is large enough to be safely walked upon.—*Vick's Magazine.*

EXTRACTS FROM CORRESPONDENCE.

FROM IOWA.—Our crops in eastern Iowa were good. Oats made 50 bushels per acre and corn about 30. We have a good crop of potatoes, but a poor market; they sell at 15 cents a bushel when we can find a buyer. Hay made a large crop. Cows sell at \$10 to \$30, and horses \$75 to \$125 for the best. A. W. Randall, Iowa.

FROM UTAH.—We are having a great boom. It commenced about three years ago, and, as a matter of course, times are very good. Wages are high and workmen are scarce, particularly common laborers. It is a pity that some of the many thousands of underpaid workmen and women of the East do not come out here to share the prosperity now enjoyed throughout the West. There is a good deal of public land yet unoccupied which is bound to become valuable as soon as the irrigating reservoirs are built. Our prospects are exceedingly bright. All we need is more people, both capitalists and laborers, but particularly the latter. S. M. Salt Lake City, Utah.

FROM WISCONSIN.—I think no place equals Wisconsin for health and opportunities for making a good living. This city has a population of over 8,000. The Wisconsin Central railroad machine shops employ about 300 men, and their pay-roll is about \$30,000 per month. Our farmers find a ready market for all they raise. We have several large steam saw and planing mills which give employment to thousands of men in the mills and woods, summer and winter. Lands are cheap—from \$3 to \$5 for good, unimproved lands within from three to ten miles of this city. We raise wheat, corn, oats, hay and the best potatoes to be found anywhere. The soil is first-rate, level, with few stones. The northern part of the state is full of iron, and thousands of tons are shipped. G. W. H. Stevens' Point, Wis.

FROM WEST VIRGINIA.—McDowell county is one of the healthiest places in the world; malarial diseases are unknown. Land ranges from \$3 to \$20 per acre, according to location. Coal and mineral lands are tolerably high here. Farming land is cheap compared with other sections of the country. We will welcome respectable emigrants to our country, rich or poor. As to lizzards, cyclones and floods, we have none of them. Labor ranges from fifty cents to \$1.50 per day; farm labor, fifty to seventy-five cents, work on the railroad and mining, \$1.20 to \$2.50 per day. Coal can usually be obtained for digging it; it is hard to find a farm here of any size that does not contain one or more veins of coal. The

rivers contain plenty of fish, such as cat, pike, perch, salmon, red-horse, carp and numerous other varieties. We have as good water as heart could wish. I have been living in West Virginia for over nineteen years, but have no axe to grind by recommending this country to emigrants. I simply want our country to become settled up with honest, industrious citizens. Saw-mills are plenty in parts of Wyoming county. Lumber is worth from \$6 to \$10 per thousand. The citizens are friendly and law-abiding and want no other kind. We want to improve our country. J. L. P. Morgan Valley, W. Va.

FROM SOUTHERN OREGON.—California can raise a better grape than Jackson and Josephine counties, Oregon, but we can produce better prunes, plums, pears and apples than any part of the Golden state. The bulk of our apple crop goes to California, and brings, in their own markets, several times the price obtained for the home product. Oregon prunes are incomparably better than the California products, and \$600 per acre has been realized for this crop in Oregon. For proof, call on the agricultural editor of the Portland *Oregonian*. Oregon pears are fully up to the California product in all respects. The claim of "M. G." that Oregon and Washington are growing markets for California fruits is certainly visionary so far as we are concerned. As to climate, southern Oregon is equal to any portion of California. Why, bless you, we are constantly receiving immigrants from the most highly boomed districts of our sister state. They come up here to get rid of malaria and the bad effects of alkali water. It has just begun to dawn upon the eastern people that Oregon is peer to any state in the Union; that the field here offered to the man of moderate means is superior to that of any of our sister states. I believe that Oregon offers more solid inducements to the home-seeker, so far as natural features are concerned, than any other state west of the Rockies. In fruits, we are ahead, and southern Oregon is in the van. We do not raise citrus fruits, of course, neither do we raise raisins, grapes extensively, nor apricots. There is more money in prunes, peaches, apples and pears, capital considered, than in the semi-tropical fruits. Come and see, is the exhortation of Oregonians. S. M. Spikenard, Oregon.

FROM TEXAS.—You kindly published in your paper a letter that I wrote you last spring in regard to our country, and now I wish to tell you of our experience with grapes. Last February one year ago we set out one and two-year-old rooted vines of American varieties. This year they bore well, some of them having as much as five pounds of grapes on one vine. There were some ripe by the 15th of June, and on the 19th of June we shipped three crates to the San Antonio market. All nine varieties that we had were ripe by July 15th. Were they fine grapes? I was raised in California, and have been used to grapes all my life, and I can truthfully say that I never saw finer grapes there than those raised here. Moore's Early, Perkins, Lindley, Excelsior and Triumph are some of the varieties we raised. Three gentlemen of our county have been experimenting with grapes, but mostly with foreign varieties. They find that the Muscat, White Malvasias, Black Malvasias and a few other varieties do exceedingly well. I have seen larger berries of the Muscat grown here than I ever saw in California, and the flavor is excellent. Then, too, they are ripe here by July 4, while in California, September is their prime month; thus we have the advantage of an early crop, and, consequently, good prices. A gentleman told me a few days ago that he sold 900 pounds of grapes from thirty vines this summer, and his children and chickens were among them all the time. His vines were from four to seven years old.

Then, too, this country produces fine, early vegetables, most all varieties coming in for use by the first of May, and some varieties much earlier, and that, too, with only ordinary cultivation. To make money, a few neighbors should plant enough so as to be able to ship by the car-load to the North. Our fall gardens are always good. Our country is getting famous for its healthfulness, and many are seeking homes here on that account. Pearsall, Tex. MRS. M. M. D.

FROM FLORIDA.—I have read the numerous long and interesting letters from California, and particularly the ones from D. B. W. Petaluma, and while I feel anxious to represent Florida in its true light, as competing with California, both in fertile soil and climate, I cannot blame him for his description of northern Illinois, its mud and its health-destroying winters. I was born and brought up there myself. Compared with that black prairie soil and theague it produces, I think the sickliest hammock region of Florida is preferable. I hope never to be compelled to make my home there again. But we do not suffer from such inequalities of climate in Florida as are described in California. Our sea-coast is more extensive, but we have no cold and hot ocean currents, no mountain ranges, no fogs, and our rainy season is really not a rainy season properly, but daily showers in the hottest part of summer—a wise provision of nature for man's health and comfort. Our seasons are otherwise similar to the coast

country and southern portion of California. Our range of crops and fruits is much greater, while we only need irrigation to a limited extent, and have as yet practically done nothing towards supplying the need. Manufacturing enterprises are springing up all over our state, those utilizing our wonderful timber supply being already well established, while the manufacture of paper from palmetto fibre and rice straw; tanning leather with the inexhaustible supply of palmetto roots; manufacture of high-grade fertilizers from the immense beds of phosphate, analyzing a higher grade than any other supply yet discovered in the world; cotton, woolen and iron factories, with many other industries, all projected, and sure to be established soon on a large scale. Our tobacco and cigar factories are already rivaling those of any other part of the known world. This is a country to which we invite skilled labor of all kinds.

What erroneous ideas northern people do have about Florida! I had them myself before I came here. I supposed I should find a country as flat as an Illinois prairie, with "sloughs," or marshes and swamps scattered thickly everywhere, and mud, as a matter of course. But instead, I find a country quite rolling, without mud, sloping off from three hundred feet above the level of the sea throughout the state, to the coast. A "back-house" runs north and south, with ribs through the peninsula, and in many places forms miniature mountains of fifty feet or more in height. The northern tier of counties, or what is familiarly known as "Middle Florida," has the highest elevation and the most fertile soil. The staple crops here are cotton, corn, oats, rye, tobacco, sugar cane, millet, hay, cow peas, etc. Here, also, grow the fig, peach, date, LeConte pear, plums, palm, grape, pecan, English walnut, strawberry, blackberry, etc., to perfection. The people of Middle Florida are very conservative, as a rule, do not welcome northern immigration, and make a very easy living, depending upon Negro labor, of which they have a very large supply "left over" from the war. The central lake region in which I am living is also known as "Mid-land Florida," and suits me better, both in climate, soil and people, than any other part. It is largely devoted to fruit growing, but has many independent and some quite wealthy farmers who pay little or no attention to fruit growing. The native Floridian, or "cracker," as a rule raises a good many cattle; some raise sheep extensively, as well as hogs, goats and horses for home use. Our elevation of an average or nearly two hundred feet above the sea level insures perfect drainage and a rapid flow of water in our streams. The much-talked-of Florida ship canal will pass just south of this region. Besides the crops and fruits above enumerated, we grow extensively the orange, Japan persimmon, Kelsey plum, Japan medlar, or lecust, peach, and honey peaches, pomegranate, catley guava, pomelo or grape fruit, grapes of all varieties, American and foreign; while in favored localities, lemons, limes, bananas and other tender fruits are produced to a limited extent. This is the section where nine tenths of all the strawberries grown for northern markets are produced. Fortunes are being made out of this one fruit alone. The water, both in this region and the more northern section, is perfectly soft and pure, coming out of the clay at from twelve to forty feet below the surface. We have beautiful flowers, both wild and cultivated, the year around. Geraniums, verbenas, roses, pinks, and many other perennials blossom all winter here in the open air. Camphor trees, tea plants and other useful and ornamental forms of tree life are common here. Even the olive is grown, with the eucalyptus and other trees not commonly mentioned. But the olive does not bear fruit readily in this part of the world, owl, I have been told, to a lack of chemical elements in the soil, which only a mountainous country supplies. The eucalyptus is so far surpassed as a shade tree by our live oak, water oak and umbrella trees, as to be undesirable. In south Florida proper, a more sandy, lighter soil prevails, as a rule, but interspersed with sections where rich hammock and first-class pine lands afford a fine chance for farming, stock raising and fruit growing. South Florida, like southern California, is flooded with "paper towns" and land sharks. But the climate there is only just a trifle warmer, on an average the year around, than in Georgia or South Carolina. Cool sea breezes and the daily shower temper the summer months, while the absence of frosty nights, which occasionally visit our region, enables that part of the state to add to farming and the fruits above enumerated (except strawberries, which are profitable only in rare instances), such fruits as the citron, alligator pear, banana, guava, lime, pineapple, sapadillo, cocoanut, mango, etc., which are produced for market with profit. The palma christi, or castor oil bean, is a pretty fair test of the "frost line" which is supposed to run north of south Florida proper. This plant, grown as an annual in the North, grows into an immense tree where not destroyed by frosts. I think that DeLand, Leesburg and Wildwood are the extreme northern limits, beyond which I have never seen it grow a second season. At Orlando and Tampa I have seen its leaves touched by frost, but not killed, and standing fully thirty or forty feet tall. W. W. B. Waldo, Florida.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Queries desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany such query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Book on House Painting Wanted.—J. A. L., Larksville, N. C. Get "How to Paint," a manual published by S. R. Wells & Co., 737 Broadway, New York.

Barn-yard Manure.—L. H., Hemlock City, Mich., wishes to know if it is better, when hauling out manure in the autumn, to scatter it broadcast or put it in piles.

REPLY:—If the land is rolling and it is liable to wash, it is better to put it in piles. Otherwise it may just as well be scattered when hauled.

Evergreen Leaves.—H. P., Oakly, Idaho, asks: "Are the old, dead leaves of cedar trees good to put on the garden?"

REPLY BY JOSEPH:—I do not know exactly in what condition the "old, dead leaves" are; but on general principles I would advise to gather all vegetable matter that can be made available, and compost it with animal manures, then use it in the garden, or wherever it will do the most good.

Sowing Blue Grass.—E. V. G., Barnesville, Ohio, asks: "What is the best time to sow Blue grass, and how much seed is required per acre?"

REPLY:—As it does not become well established under three years, it should not be sown alone or for only one or two crops of grass. You can sow it early next spring on your winter wheat. If sown alone it will require two or three bushels of seed per acre.

Beans for Horses.—F. S. P., Oberlin, Ohio, writes: "Youatt, in his book on the 'Horse,' speaks very approvingly of feeding beans to horses. What kind of beans does he mean? Where can seed be obtained? Will they do well in northern Ohio?"

REPLY:—He means the ordinary field beans. You can get them of any good seedsmen. As they are grown extensively in New York and Michigan they will, doubtless, do well in your locality, if your soil is suitable.

Barley Straw.—H. L. K., Manchester, N. H., writes: "Can you inform me as to the value of barley straw that has been run through a threshing machine, and also how many feet to allow for a ton in a mow that has stood about two months?"

REPLY:—If the barley was cut green, as it should have been, and the straw has not been damaged, it will make excellent feed for horses. Its value will depend on its quality. The cubic feet in a ton of straw in the mow varies so much that it would be useless to make a guess at it.

Salt for Currant-worms.—Mrs. H. F. N., Pa., writes: "Put three or four quarts of brine as strong as for pork pickle around the roots of the bush, or a couple of quarts of salt, whichever is the handiest, and it will prove an effectual preventive. Should this be neglected and the worms make their appearance upon the leaves, from one fourth to one half pound of salt dissolved in one gallon of water and thoroughly applied, will paralyze them so effectually that there will be no resurrection of 'ye little pest.' I have used this remedy and watched its effects for more than a dozen years, and it has never failed in a single instance."

Piping Spring Water.—J. M. G., Springdale, N. C., writes: "I want to bring the water from a spring, which is 1,760 feet distant, to my dwelling house. The fall from the spring is 53 feet. The spring discharges 70 gallons per hour. Will a three-fourths-inch pipe bring all the water? The temperature of the water in the spring is 54°. If the pipe is laid three feet deep in the ground, will the water get warm in the summer?"

REPLY:—A three-fourths-inch pipe can carry all the water, but it would be better to use a larger pipe. A small one is apt to clog up. Do not use smaller than inch pipe. The water will get warm in summer flowing through that length of pipe in warm ground.

Treatment of Hyacinths in Pots.—E. T. A., Normandy, Tenn. Pot your bulbs in light, porous soil, such as may be obtained from the woods, draining the pot well by placing cinders, charcoal or pieces of broken crock in the bottom. In potting do not cover the bulbs, but simply press them into the soil, allowing the crown of the bulbs to protrude above the surface. Firm the soil well about them and water thoroughly, then set the pots in a dark, rather warm closet till the bulbs are well rooted. A dark cupboard or even a close box in the sitting-room will answer to start the bulbs. In from four to six weeks they will be ready to bring to the light, which should be done gradually. Give them the coolest window in your sitting-room, and avoid direct sunlight till you want the flowers to develop. Keep the atmosphere moist, and guard against too much heat. In a dry, hot room the flowers sometimes fail to open. Water freely. A five-inch pot will accommodate three bulbs, as shown in the engraving, and when the colors are varied, as red, white and blue, the effect is fine. Single Roman and Dutch hyacinths are best for pot culture, and are sure to bloom satisfactorily if treated as here advised.

Fertilizer for Sweet Potatoes.—C. D. G., Vineland, N. J., writes: "Cost of manure is the largest item in expense of raising sweet potatoes. Can I not get the materials and mix them at home, instead of paying the full price fertilizer manufacturers ask for their goods? Composted stable manure and night soil gave slightly better results than Mapes' potato manure, but such compost can be had only in very limited quantities."

REPLY BY JOSEPH:—Your soil, probably, is the white sand characteristic of your vicinity. I do not know in what state of fertility

it is, or what particular element may be most scantily supplied. I suspect, however, that all three elements of plant food—in other words, a complete manure—are needed to make your land more productive, and also that the only reason why compost gave better results, was that you applied it more generously (comparatively) than you did the potato fertilizer. This latter, which, on soil, same character as yours, usually does very well, should be well mixed into the hill, not broadcasted. As a rule, it is most convenient for the grower to use the honest, high-grade fertilizer to be had ready made at the nearest reliable manufacturer's. In many cases, however, the farmer can save some money by buying the materials and mixing them at home. If you had read the bulletins as issued from your experiment station at New Brunswick, you might have gotten all the information you need on this point. Concerning substitutes for stable compost, the mixing of materials for fertilizers, etc., I can only refer you to my articles on agricultural chemistry.

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 35 King Avenue, Columbus, Ohio.

Coughing and Discharge from the Nose.—N. G. J., Davidson, Dak. Coughing and discharges from the nose are symptoms attendant to almost every respiratory disorder, especially if of a chronic character. It may, and it may not, have anything to do with the disease of last winter. I have no means of knowing if you do not state particulars.

A Blue Film.—H. C. A., Langford, Col., asks how to remove the blue film from his mare's eye. It covers the lower corner and part of the star or sight, and she does not see very well out of that eye.

ANSWER:—What kind of a blue film is it? What brought it on? Is the opacity on the corner, or in the exterior of the eye? How long has it been there? And, finally, is the eye of normal size, or smaller than the other?

Stiff in the Hind Legs.—F. F., Mont Clair, N. Y. If the animal is not otherwise ailing there is no danger of a communication. If you will be so kind and state particulars I may be able to tell you what is the matter with your bull. What you call stiffness may be due to a variety of causes, and neither time nor space permit me to count up all possibilities. Persons who desire a satisfactory answer must state all essential particulars, otherwise it cannot be given.

Fistula.—J. N. J., Walshville, Ill. When the abscess under the jaw broke, the opening, it seems, must have been too high, so that the pus could not be discharged; hence, always some remained at the bottom and kept up the process of suppuration. In that way a fistula was produced. As it is now, it requires an operation which can be performed with safety only by one who is perfectly familiar with the anatomy of the parts in question. I therefore have to advise you to call on a veterinarian.

Heaves.—L. B. E., Laforge, Pa. If your horse is affected with heaves, you probably have fed some dusty hay. You have to avoid that, and either feed no hay at all, or only prairie hay. If the latter cannot be had, you may feed oats, oat-straw and corn. See to it that your stable is kept clean and free from foul air. There is no cure, but the dietetic treatment just delineated will cause considerable improvement. For further information, I have to refer you to recent issues of this paper. Color and height of the horse are very immaterial.

An Exostosis.—R. V., Urbana, Ohio, writes: "I have a colt, seven months old, which was kicked by a horse on the left fore leg, midway between the fetlock and knee joints, about two months ago. The wound formed a running sore, but is now healed, leaving a hard lump the size of a hulled walnut. Can the lump be removed without injury to the colt, or what treatment would you suggest?"

ANSWER:—The "hard lump," very likely, is an exostosis. It will decrease in size when the colt grows older. Still, if you desire to hasten its decrease, you may rub in, once every other day, a little gray mercurial ointment, or may apply gentle pressure by means of a bandage.

Foot-rot.—F. F. S., Pearle, Mich., writes: "Is the foot-rot in sheep contagious to the extent that driving a diseased flock along the highway endangers a flock just over the fence? If neighbors, whose land adjoins, each keeping sheep, and one flock is badly diseased, is there danger of the other taking it? Is there a penalty for keeping diseased flocks?"

ANSWER:—Foot-rot is infectious, but whether it will be communicated in the way you state, it seems to me, will depend upon circumstances. If the road or highway drains through the field, the possibility of an infection may not be excluded. If it does not, I would not be afraid of any communication, because the germs which produce the disease are certainly not communicated through the air. As to the second part of your question, I am not familiar with the laws of Michigan, and therefore advise you to apply to the state live stock commissioners for information.

Several Cases.—A. N. G., Conowingo, Md., writes: "What will kill worms in horses? I have a horse that was in nice condition last spring, but, all at once, he began to fall away and now is very thin, and his coat is very dry and rough. What will cure scratches or cracked heels. We are troubled a great deal around here in winter time with them."

ANSWER:—As to horse No. 1, you will find your question answered in recent issues of this paper. As to No. 2, I am unable to tell you what ails your horse, because your description affords no basis for a diagnosis, except that the animal, very likely, is suffering from some cachectic disease. As to No. 3, allow me to say that so-called scratches and grease heal are children of neglect. If you clean your horses' feet and legs in due time, and in a proper manner, every time they have become dirty, your horses will not suffer that way. Cleanliness and repeated applications (three times a day) of a liniment composed of liquid plumb subacetate, one part, and olive oil, three parts, will cure them, provided the causes, dirt and mud, are avoided, and the legs and feet, when dirty, are cleaned dry and in a thorough manner.

A Malignant Wart.—J. Q. S., Bigelow, Mo., writes: "I have a mule that has a wart on his belly, a little to the right of the center. It has been there about three months. It is not very large, but keeps raw and bloody. Please tell me how to remove it."

ANSWER:—Take a small surgeon's sponge, cut a small hole into it, extending to the center, then take a stick of convenient length, not more than half an inch thick at one end, cut a notch in it close to the end, insert that end into your sponge, and fasten the latter to the end of the stick by tying it to the latter, where the notch is, with twine. The stick is simply intended as a handle to your sponge, which, as you will soon see, must be long enough to enable you to keep out of reach of the mule's hind legs. Then procure some nitric acid, dip your sponge into the acid, and when it ceases dripping touch the wart with it. Repeat this operation, that is, touching the wart with nitric acid, every five or ten minutes, until you have succeeded in destroying the wart to about half an inch above the level of the skin. In a few days you will see whether the wart is perfectly destroyed or not; if not, repeat the operation, but if you follow my directions, a repetition will hardly be necessary. Don't burn too deep, so as to destroy the normal tissue. If the mule is unruly during the operation, put a twist on his nose.

Two Horses Out of Fix.—S., Sharpsburgh, Pa. As to the horse which suffers from chronic intestinal catarrh, change his food. Give nothing but what is easy of digestion, feed regularly, and give no rye, or anything else that is equally difficult of digestion, and don't irritate the digestive organs of the animal with condition, nor any other powders of which you do not know the constituents. It is possible that the animal also has worms; still, the symptoms given do not indicate beyond a doubt that such is the case. Do not water the horse with ice-cold water. If you have more confidence in drugs than in a good dietetic treatment, you may give, mixed with the food, three times a day, a heaped tablespoonful of the following medicine: Chlorate of ammonia, one ounce and a half, powdered anise seed, powdered licorice-root, and powdered marsh-mallow root, of each, two ounces. As to horse with diseased feet, clean his legs twice a day in a thorough manner with a good brush, cut away all loose and rotten horn, and when this is done, lift up the animal's foot and hold it so as to bring the sole in a nearly horizontal position, including a trifle towards the toe, then pour some concentrated carbolic acid on the rotten frog and into the clefts between frog and sole, and keep the foot for two or three minutes longer in the same position, take care that the carbolic acid does not come in contact with the skin, and let the foot come down. After one foot has thus been treated, perform the same operation on the next one. It is necessary, however, to keep the floor of the stable clean and dry; otherwise, the treatment will be of no avail. If, in a day or two, the frog should not be dry and without any offensive smell, the same procedure must be repeated. Your horse needs outdoor exercise.

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Our Fireside.

SOMETHING GREAT.

THE trial was ended—the vigil past; All clad in his armor was the knight at last, The goodliest knight in the whole wide land, With face that shone with a purpose grand. The king looked on him with gracious eyes, And said, "He is meet for some high emprise," To himself he thought, "I will conquer fate, I will sure die, or do something great."

So fresh from the palace he rode away; There was trouble and need in the town that day; A child had strayed from his mother's side Into the woodland dark and wide. "Help!" cried the mother, with sorrow wild—"Help me, sir knight, to seek my child! The hungry wolves in the forest roam; Help me bring my lost one home!"

He shook her hand from his bridle rein; "Alas, poor mother, you ask in vain; Some meaner succor will do, may he, Some squire or valet of low degree. There are mighty wrongs in the world to right; I keep my sword for a noble fight, I am sad at heart for your baby's fate, But I ride in haste to do something great."

One wintry night when the sun had set, A blind man by the way he met; "Now, good sir knight, for our lady's sake, On the sightless wanderer pity take! The wind blows cold, and the sun is down; Lead me, I pray, till I reach the town." "Nay," said the knight, "I cannot wait; I ride in haste to do something great."

So on he rode, in his armor bright, His sword all keen for the longed-for fight, "Laugh with us, laugh," cried the merry crowd, "Oh, weep!" wailed others, with sorrow bowed. "Help us," the weak and weary prayed; But for joy, nor grief, nor heed he stayed. And the years rolled on, and his eyes grew dim, And he died—and none made moan for him.

He missed the good that he might have done, He missed the blessings he might have won, Seeking some glorious task to find, His eyes to all humbler work were blind. He that is faithful in that which is least Is hidden to sit at the heavenly feast. Yet men and women lament their fate If they he not called to do something great.

—Florence Tyler, in New York Tribune.

A CHILD OF NATURE.

BY JEANNETTE H. WALWORTH,

Author of "Southern Silhouettes," "True to Herself," "The Silent Witness," "A Strange Pilgrimage," Etc., Etc.

CHAPTER IX. ON THE SAFE SIDE.



MRS. FEATHERSTON, returning from a round of fashionable calls, late one afternoon, nearly a month after Una Upham's disagreeable social experiences, found occasion to take herself severely to task. She had made a promise and broken it! Made it to Fenton, at that! As far back as memory could take her, she could not recall an instance of like failure on his part. She knew very well that he would be waiting for her in her own snug, little, back parlor, and by way of lessening her remorse for her own shortcomings, she industriously recalled, as she rolled homeward in her neat brown coupe, all the damaging bits of gossip which had floated to her ears in that morning's round of calls concerning the girl Fenton had asked her to befriend.

Malicious people, those who knew Mrs. Featherston sufficiently well to pass upon her most private actions, indeed, even to penetrating the motives therefor, were of the opinion that Fenton Cooper's handsome sister had leanings towards Bohemia, but was discreet enough to maintain a firm footing on the safe side of that mythical territory. Fenton knew better. He knew, however, and condemned, not always mildly, a certain amiable weakness or weak amiability, which prevented Marie's closing her doors firmly and resolutely against certain men and women at whom stricter folks looked askance.

She decided not to act upon the defensive, in the matter of this broken promise, but to be the attacking party, if, as she fully expected, Fenton should be waiting for her report. He was there, apparently dozing peacefully before the anthracite fire, when she swooped down upon him with many a silken rustle.

"There is no use talking, Fenton, I can't do it. Wasn't it enough that you should efface yourself from society, disfigure yourself personally, and submit to any amount of snubbing from those parvenus, without asking me to matronize a girl who, in her very first season, has managed to make herself the toast of the fastest club in town?"

"She has managed nothing," said Fenton Cooper, vehemently. "She has been the helpless victim of a silly mother and a designing scoundrel, and it was because of her youth and helplessness that I had recourse to my own blundering device to watch over her. You have failed me in this matter from the very beginning, Marie."

"You should not have made it so difficult,"

said Mrs. Featherston, sulkily. "If you had not got that romantic nonsense in your head about watching over her in a false character, but had gone to her in your own proper person and courted her, if you are bent on having the little simpleton for a wife, I would have known better where we both stood, and what was expected of me."

"You knew quite well where we both stood and what was expected of you," said her brother, coldly. "You knew that it was only when I saw that you were not going to befriend her that I devised my own clumsy plan. I never knew you so afraid of other people before."

She ignored the reproach in his last words, as she said, reflectively:

"If it had not involved the sacrifice of your splendid moustache, and the wearing of that ridiculous, gray wig, I should call it anything but a clumsy device. I am sure you have been



"HEAVENS, FENTON, YOU LOOK ACTUALLY MURDEROUS."

a conscientious tutor. No one will ever teach her more satisfactorily."

"No one would have done. You know she has dismissed me. 'Breaking down from over-study,' her mother says." His lip curled.

"Suffering from a shock to her nervous system, Dr. Brett says. I met him at the Murewells. I took him back to his office in the coupe."

"And he has been called in to see Miss Upham?"

"Yes, he was just from there. And, Fenton, I hate to tell you, but I really think I ought to. That girl's name is mixed up in a very curious story—worse than a curlous story. It is scandalous."

Fenton was looking at her savagely.

"You can tell me nothing that will shock me very much, nor that will shake my faith in the purity and sweetness of that ignorant girl's soul."

"Why did you not marry the girl, since you are so idiotically in love with her, before she was exposed to the dangerous fascinations of the life she is leading now?" Mrs. Featherston asked, gravely. "It would have been better for you both."

"I wanted to test the strength of her affection for a poor man. I would not have had her say 'yes' to me, Marie, knowing me to be a man of wealth and position. I might have doubted her motives. Nor would I let her bind herself to the first man who had ever paid her a compliment. Moreover, I did not care to present an utterly ignorant child to the world as my wife. I supposed she would be sent to some good school, where she would be enlightened and polished up to a degree. How could I tell that the possession of a little money would turn her silly mother's head so completely?"

"My poor boy, I am afraid, if what I heard this morning has a grain of truth in it, her mother's is not the only head in the family that has been turned."

"What do you mean, Marie? Out with it. There is more in your face than in your words."

"I asked Dr. Brett if he supposed it was true, and he said, from the statement of the maid, whom he questioned closely, in order to discover the cause of Miss Upham's hysteria, he was inclined to credit the report. But of course, as the Upham patronage is worth a good deal to him, he bound me to secrecy."

"What report?" thundered Fenton. "You must remember that I have not so many sources of information as you have."

This taunt pricked Mrs. Featherston into a cruelly abrupt statement.

"The report that she was actually in the house on Tompkins' square, from which that horrid Leonard Heywood was taken to the Tombs."

"And you believe that vile scandal?" He was on his feet, now, and the wrath in his eyes was something terrible to look upon. Marie put her jeweled hands between her eyes and his stormy face.

"Heavens, Fenton, you look actually murderous!"

"I feel murderous. But you have not answered my question, Marie. Do you believe that vile lie?"

"I do."

"Why do you believe it, sister?" he asked, almost with fierce impatience. "Why should you care to believe that a pure, good girl, ignorant of the world and its wiles, should

have sunk so low so quickly? Never mind about me; my hurt is nothing. But why did you not rather tell them that it was not so; that it could not be so; there was some mistake. Is it not the promise of every good, true woman, my sister, to shield her sister woman from even the suspicion of evil? Such a child as she is, too! Why did you not shield her, Marie?"

"Fenton, you are absolutely infatuated."

"No, I think at no time since I first met Miss Upham have I felt freer from the influence of her personal beauty than at this moment—so free that I propose going to her father this moment in my own person, as Fenton Cooper, a man of some influence, and to tell him of the stories that are afloat, and get his authorization to deny them." Mrs. Featherston looked at him with angry scorn.

"Do so; it will be in keeping with your Quixotic role. Better marry her off-hand; that will be the quickest way of silencing the gossips, since you will make yourself responsible for her."

"Marie, that was unworthy of you," he turned toward her to say, in a voice of grave rebuke, before lifting the portiere and disappearing.

He walked to the nearest cab-stand and had himself conveyed as quickly as possible to Mr. Upham's door. It was near the universal dinner hour, but he did not care a rush for the conventionalities of life in his present excited mood. He would ask for Mr. Upham alone. He would tell him the risks his daughter was running. He would utter his warning, and then he would have done with the Uphams forever. At that moment intense weariness and disgust reigned supreme in his soul.

When mounting the steps to the high, brown-stone stoop, he was struck by the gloomy exterior aspect of the Uphams' home. He had, many an evening, impelled by the restlessness that torments all lovers, walked by the house after lamp-light. On one or two such occasions he had silently censured Mrs. Upham's love of illuminations, and had wished that, in his province as tutor, he might suggest the drawing down of all the front blinds. They were all drawn down on this occasion, and not a glimmer of light was visible, even through the thin China silk draperies of the glass front door. It looked as if every one might be out, but nevertheless he touched the electric button. He had to repeat the operation twice, then he could hear some one ascending from the basement. The gas in the hall flared up, and Bab, not resplendent in her customary white, frilled cap, but listless and red-eyed, opened the door. He could see that beyond the single gas jet she had just lighted the house was in complete darkness.

"Is Mr. Upham in?" he asked.

"No."

"Mrs. Upham?"

"No."

"Miss Upham?"

"Nobody; they have all left town."

"Left town? My good girl, you don't mean that they have actually gone away?" He stepped inside and closed the door behind him.

"Yes, but I do, sir. She would have it, and the old gentleman seemed like he was ready to burn the house down over our heads if it would pacify her. She said she would go crazy if they didn't get her out of this town, and she looked like it, sure."

Fenton Cooper stood before her with his hat in his hand, the perfect picture of bewilderment and discouragement. Bab was only too glad of an auditor.

"And I wouldn't feel so bad," she said, mournfully. "If the old people didn't lay it all at my door. They say it was my fault; but when she turned round and took my part,



FENTON COOPER AT THE DESERTED HOUSE.

and told them they shouldn't send me away, they let me alone and left me here to take care of things. They're that scared about her she can make 'em do anything she pleases; yes, she can."

Fenton Cooper sat down in one of the hall chairs, unbidden. His knees were trembling under him. Was Una going to die?

"What is it that the old people lay at your door? My good Bab, I can't follow you."

"Her being in that house on Tompkins square when the trouble came."

He was on his feet once more, livid with

rage. "Then she was in a house on Tompkins square at the time of—of an arrest?"

"She was. But it wasn't my fault. You see, she was the most fractious young lady I ever did have to do with. She said she wanted to take a long walk, and I took her down to Tompkins square, which is a good enough place if you set down on the benches and just look around. But how was I to tell that she would go poking about and get herself into trouble? When I came back from running into my sister's house, just to ask after her, and couldn't find my young lady, I was for starting straight home, thinking she must get tired of waiting for me, when I saw a crowd collected 'bout a house across the square; and when they told me the piece was up there, I stood by to see what was going on. You could a' knocked me down with a feather, sir, when



HE CAUGHT HER HAND AND PRESSED IT TO HIS HOT LIPS.

my young lady came walking out of that door, so white and scared that if I hadn't grabbed her and dragged her out of the crowd by main force, she would have fallen in a faint right there." Bab's tears were flowing copiously.

"And what were the police doing at that house?" Fenton Cooper asked, in a savage undertone.

"Don't you know, sir? Haven't you heard? Didn't you hear how Mr. Leonard Heywood, him that was always visiting in this very house, and—here Bab broke down completely. 'Oh, go away, please, sir. There's some things I can't sleep with on my conscience. I want to go to Father Branson first thing to-night.'"

"Will that ease your conscience?"

"It will help some. But I didn't do right; I didn't do right. You see, I thought he was the right stripe, because the old lady seemed to set such store by him. But he was a sneak all through."

Fenton Cooper rose with an exclamation of disgust. He had failed of his object, which was to warn Mr. Upham of his daughter's peril, but he had learned the horrible truth. He turned abruptly towards the front door, pausing with his hand on his grasp, he asked one more question:

"Can you tell me how a letter will reach Mr. Upham?"

"No, sir; I don't know any more than a man in the moon where they have took themselves to. They left town about two hours after she said she would go. They wasn't no time packing."

More completely discomfited than he ever remembered to have been before in his life, Fenton Cooper left the deserted house, and re-entering the cab, had himself driven to his club. It was the first time he had entered it for eighteen months. His sister, Mrs. Featherston, was the only one of his acquaintances who had not really believed him to be traveling in foreign lands.

"Nothing easier," he had said, gayly, when arranging his mystification with Marie. "I can't stay about town as Fenton Cooper without the drummer myth exploding. As it is, I take rooms in Harlem, avoid my usual haunts. You utilize the letters you got from me on my last trip to Paris, and we have it. It is easy enough to lose one's self in this city."

The plan had worked to a charm. Even Mr. Randolph Bascombe was growing petulantly impatient for his return. This gentleman was the first man he encountered on entering the reading-room of the club that evening.

"Been to dinner, Uncle Ran?" he asked, at the close of half an hour's exhaustive catching on the elder man's part. Mr. Bascombe had not been to dinner, so they passed into the club restaurant side by side.

"Well, what has happened while repeating since I left?" Fenton asked, towards the close of the meal, during which he had invented quite a stirring foreign experience for his uncle's diversion.

"If you put it that way," Mr. Bascombe answered, "I'll have to say 'nothing,' for scandal never is worth repeating."

"Scandal?"

"Lots of it. The devil has been cheated of his own once more."

"By whom?"

"By that prince of impostors, Heywood. Do you know they actually had the fellow under arrest for maltreating his wife, when all of a sudden it turns out that the woman injured herself in attempting to commit suicide, and Heywood comes off with flying colors in the role of a much slandered innocent. Shouldn't wonder if Marie Featherston would have him at her next 'at home.'"

"By heavens, she won't, though!" said Fenton, fiercely. "Marie has been entirely too complaisant. I am going to take her in hand for the future."

"Well, when you do, and I think myself it is high time, make her drop this fellow's fiancée, also. They are a bad lot."

Fenton looked at him with startled attention, his handsome, young face full of alarm. "His fiancée?"

"Yes. Isn't it astonishing that such a man could get a wife? By the way, Fenton, what have you done with your moustache? You look like a plucked fowl."

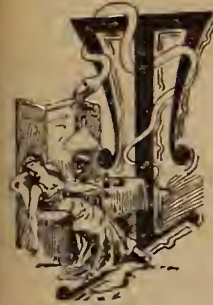
"Never mind my moustache. You were talking of Leonard Heywood's fiancée."

"Yes, to be sure I was. Well—"

Just then one of the club attendants laid a telegram down before Mr. Bascombe. He opened it, and reading it at a glance, flung it over to Fenton with an angry exclamation: "I say, Cooper, if ever I had a nuisance imposed upon me without kicking at it, it is the one you foisted on me in the person of that old man Upham. Read that, sir, and settle this mess yourself. I am tired of acting as your catspaw."

CHAPTER X.

LEONARD HEYWOOD DEMANDS HIS REWARD.



HE tide of Ida Dashwood's popularity was at its ebb, and she knew it. She wisely withdrew from the social circles in which she had shone with a rather lurid brilliancy, while there were yet occasional invitations to acknowledge or "retract" to formulate. Soon she would be dropped from every eligible visiting list, even from indulgent, complaisant Marie Featherston's. She was too shrewd-witted, too worldly-wise, too sadly experienced, not to be able to forecast the possibilities of her own future prospects as clearly as she would have forecast those of any other woman who had dared as much as she had—and failed.

The reflections of a society woman whose physical charms are on the wane, and whose trained ear catches the first, faint mutterings of the storm before which she is destined to go down, like a battered barque in a heavy sea, are not likely to be joyous reflections. Hers certainly were not, but she yielded to the inevitable, slowly and stubbornly.

The habits of a lifetime are not cast aside as readily as a worn-out glove. Miss Dashwood's life-long habit had been to make herself as beautiful as possible, on all occasions. Perhaps this was why, with the bitter consciousness that there would be no more ardent glances cast upon her than her careless father's indifferent ones, she yet persisted in attiring herself carefully for the small dinner-table (set for two only, since Mr. Dashwood had attained all of his political ends), and in spending her lonely evenings in the big, silent parlors.

It was thus that Leonard Heywood found her when, demanding admittance at her door for the first time since he had left it so precipitately, months before, he was ushered into her presence by a new footman. Maurice had learned too much. Heywood had to traverse the entire length of the two long parlors to reach the spot where she sat by a softly-shaded lamp, with an open book upon her lap before an open fire.

She did not rise to meet him. She did not even extend a hand in greeting. She simply raised her superb eyes coldly to his face, as he came to an embarrassed standstill upon the rug before her. He had come there to reproach her, and to demand his promised reward. He had "made Una Upham the toast of his set," he had fulfilled her bidding to the letter, but he was a ruined man. Words of reproach, however, did not come readily. She was very beautiful still. There were no signs of the wear and tear of time and dissipation discernable by the soft, rosy light of the lamp on the table at her elbow. The round, white throat rose from its covert of finest lace and dark blue velvet like the neck of a stately white swan. Her lips were as full and red and dewy as the lips of a maiden crimsoned by love's first kiss. Her form, as she leaned languidly back in the depths of her easy chair, was perfect in the richness of its curves, and her eyes were the same unparagoned eyes that had years ago caught his soul in their meshes and held him in bondage ever since. He gazed down upon her with a mighty longing in his eyes and in his heart. She was older than he, but what of that? Perhaps it had made it easier for her to enthrall him, but what were the years to him now? He held out his hands to her yearningly. His voice was scarcely more than a husky whisper.

"I have come to you for my reward. I could not wait longer."

"Your reward? Pray, be more explicit."

"I will. You have not forgotten your commission? I was to make her the toast of my set. You asked no worse fate for her."

Miss Dashwood raised her black brows contemptuously. "That nonsense about Miss Upham, do you refer to? I had forgotten all about it and her. I should think if there was an open account between us, you would have considered it closed by—my—father."

He turned pale, and seated himself opposite her without invitation. Roscoe Dashwood had saved him from death.

"Of course you mean his acting as my counsel."

"Yes, and getting you acquitted. Does not that cancel everything between us? I did not think ever to see you again. I had hoped I would not."

It was cruelly done. He sat there gasping for breath for a second or two. Surely she did not believe him guilty of that crime. He asked her that question as soon as he could command the words.

"Believe it? Why should I not? Circumstantial evidence was very strong against you. And—" Suddenly her assumed composure gave way entirely. "I hate you, Leonard Heywood, because you allowed my home to be mentioned in connection with your low crime. That was the reason and the only reason I made my father exert himself in your behalf."

"Will you let me tell you all the truth about my past, Miss Dashwood? And then, when I have done, if you still refuse me the meed of pity and sympathy I have a right to command at your hands, I will go away convinced that I have periled body and soul for a woman who has no soul of her own."

She closed the book in her lap and laid it beside her handkerchief and fan on the table; then she settled herself more comfortably in her chair, shook an imaginary speck of dust from her velvet draperies, and said, with icy deliberation:

"Go on. I think you and I ought to know the entire truth about each other at last."

"I do not imagine for a moment that you think me the low order of scoundrel the papers would make me out. I did not hurt my poor wife. It was her own rash act, I presume, and I drove her to it, and all for love—of you, Ida Dashwood."

The woman to whom he made this woful confession sat gazing into the fire, with her long lashes almost touching her marble-smooth cheeks. She lifted her shoulders slightly, and said, impatiently:

"Go on, please; don't be forever telling your story. It is slow torture."

He resumed, doggedly:

"You know I have always had money, and

no one to tell me where I should go to spend it, or what I should do with myself at any time. I don't know how I came to wander up to Mrs. Bryant's farm as a summer boarder. Somebody sent me there for the hunting, I believe. I really loved my little wife, Maggie, her daughter, and I spent the most of my time there for four or five years. This city life would have killed her, and then she would not have been the same to me here as she was there. I should have been ashamed of her in town. I was fond of her in her country home. It would have been like bringing a field daisy to town to compete with Klunder's orchids. The daisy would have been flung aside for a weed. She rested me when I got tired of town and clubs. She was as well satisfied as I was, until I got to staying down here so much longer. It was after I met you, Miss Dashwood. I've never been a rational human being since. I managed to deceive her for a long time. I could have gone on deceiving her to the end of time, but it was her mother. The mother was as shrewd and suspicious as Maggie was sweet and trusting."

"I did not know they had come to town. I had received a letter from Mrs. Bryant, telling me she had leased out the farm, and was going to take Maggie and the children away for a trip, but it was not until that night when you sent me to close that front window, and I saw, out there by the electric light, poor Maggie's white, upturned face, that I knew she was within a hundred miles of me."

"I met her at the door myself. She had come here to see you. I had some little trouble in getting her to go away with me. I went with her over to Tompkins square, where she told me she was living. She said all the wild, reproachful things any other woman would have said under like circumstances. She wanted to make me promise, there and then, that I would never see you again. I could not do that, for I knew it would only be another lie. I wanted time to think—to find some way out of the mess. I told her I would come to see her the next day, and with that I got up and walked away from her."

"I suppose, in her despair, poor Maggie, she tried to take her own life. I did not go back the next day, because—because I could not promise her anything. I knew if I told her I would give you up it would be just another useless lie. No, I was under your spell, then, as now. There seemed nothing in life worth living for but to do your bidding, to win one smile from your beautiful lips."

"Fool!" The word fluttered audibly from between Ida Dashwood's closed lips, but not a muscle of her face quivered.

"I concluded simply to avoid her. I thought it would not be easy, even for that shrewd mother of hers to find me, if I kept away from you and changed my lodgings. From that moment up to the one of my arrest on the charge of murder, I heard nothing more of my wife. The mother ferreted me out the night of the ball. It came out in the trial that my wife was discovered in Tompkins square in a fatally wounded condition. But I did not do it, Ida. So help me God, I am not responsible for Margaret Bryant's death. Unutterably base I may have been, but not blood-stained. I am not responsible for that awful tragedy."

"Directly, perhaps not."

She was looking at him with merciless directness.

"And that is all you have to say to me? Not one word of pity for the thing you have made me."

"One does not like to be held responsible for one's own shortcomings and other people's, too. I believe the majority of men seek to convince the women whom they honor with their often transferred affections, that they are nothing but so much putty, to be patted and punched into any shape. Why did you not tell me, when I first met you, that you had a wife?"

"Was it necessary? Were there not as many married men in your train as single ones? Did you ever question your own right to appropriate hearts and trample upon them? Did you not delight in your power to intoxicate, enthrall and enslave men at your will? By all the laws of common sense and justice I ought to hate you, Ida Dashwood."

The worm had turned at last.

"Yes—" She turned her perfect head with slow grace to let her eyes rest once more upon the glowing coals. They seemed to impart a burning brilliancy to her eyes. "By all the laws of common sense and justice you ought to hate me, and you will after awhile. Everybody will before long. Society demands its periodic sacrifice of human flesh. The lot has fallen to me this time. Soon, long before I have grown old or ugly, I will be spoken of as the woman who brought ruin and wreck to all who loved her and to all whom she loved. I want you to go away while there is time, Leonard. I am sorry for you, but I don't just exactly know why; I have never felt sorry for any one before. I think it must be a sure sign of approaching imbecility." She smiled, but it was as if a wintry sun had cast a wintry ray of light upon a frozen landscape; there was no warmth, no brightness in it.

He had never heard a despondent utterance from her lips before. It filled him with pitiful dismay and wonder.

"If you are sorry for me you will let me stay—"

She turned her blazing eyes on him before he could finish his sentence, and began talking in an excited, impetuous fashion, entirely unlike herself.

"I am going to be a friend to you for once. I know what you were about to say. You fancy that you are still in love with the woman whom you candidly proclaim to have been your ruin. You do not know what love means, Leonard Heywood. But I promised you a reward for services rendered. Go away from me; mingle with the men who discuss the small affairs of life. Learn to estimate me as the world estimates me, and if at the end of one miserable, little year you are not ready to thank God for the 'no' I give you to-night, then come back and I will exchange it for a 'yes.'"

"And be my wife?" He caught her hand and pressed it to his hot lips.

"And be your wife. Now, go away, please; I am so tired."

He went away, treading softly, as if he would even spare her the irritation of his retreating footsteps.

"So tired," Ida Dashwood repeated, wearily. Then she got up, and walking over to the buffet in the hall, filled herself a glass of water. Into it she dropped a white powder which she took from her pocket, and gazed back to her chair by the fire, she resumed the listless attitude Heywood had left her in. With her soft and jeweled hands folded calmly upon her lap, her head resting against the cushions of her chair, and her white lids peacefully closed, Mr. Dashwood discovered her, sleeping profoundly, when he entered the house far past the hour of midnight.

[To be continued.]



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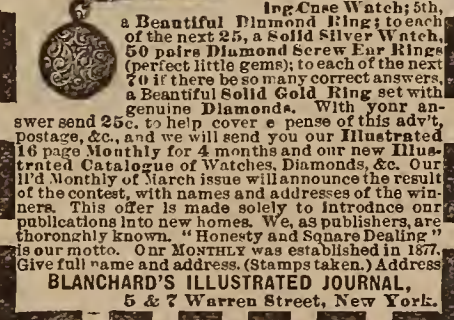
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A poor, poor man, who toiled from day to day,
At Christmas-time spent all his little store
In buying gifts for those who nothing had—
Who could not keep grim want from out the door.

Through the dim streets he went where God's
babes dwelt,

Touching with tender hand the low and vile;
And when his store of goodly gifts were spent,
He gave what he had left—a word, a smile.

When great world was at its feast that night,
He sat alone, blessing his crust of bread;
The embers at his feet burned dim and low—
The stars looked through his shelter over-
head.

A laughing crowd passed by and saw him there.
"He gave so much, and now hath naught,"
they cried;

"Straw for a bed, with rags to cover him—
The cracks in his poor hovel cold and wide."

And while they spoke he lifted up his face
Whereon there shone the light of a great
content;

Straightway their lips grew silent, but their
eyes
Asked in mute wonder what the problem
meant.

Then through the waiting silence answer
came,

And the gay crowd stood breathless by the
door:

"He that in God's dear love gives all he hath,
In God's dear love hath all—than all hath
more!"
—Annie F. Burbank.

HOME TOPICS.

GOOD LIGHTS.—During the long, winter evenings, nothing except cheerful companionship adds more to the attractiveness of home than good lights. Even where gas is in the house, many people prefer the light of a lamp to read or work by. Hanging lamps are the best if there are small children in the house, as they very much lessen the danger of any accident happening. To insure a good light, the lamp must be kept clean, both chimney and burner, and filled and properly trimmed. The only right time to attend to this is in the morning. Have the chimneys bright and shining, and the holes in the burner kept open to admit air.

If a burner is old and gummy, so it does not give a good light, it may be made as good as new again by boiling it in a little water with ashes or washing-soda in it, until it is clean and bright again. When there is any sediment in the bottom of the lamp, it should be emptied, washed and the oil strained before being returned to the lamp. Often a wick will become filled with dust, etc., from the oil, and with everything else in good order, the light will be poor. The only remedy then is a clean wick. If you have no new wicks, and the one in the lamp is still long enough, it will be as good as new after being washed thoroughly and dried.

Shaded lamps are best for the eyes, and a handsome shade adds much to the beauty of the lamp, but no amount or beauty of lace or silk trimming will suffice if the morning wick trimming is neglected.

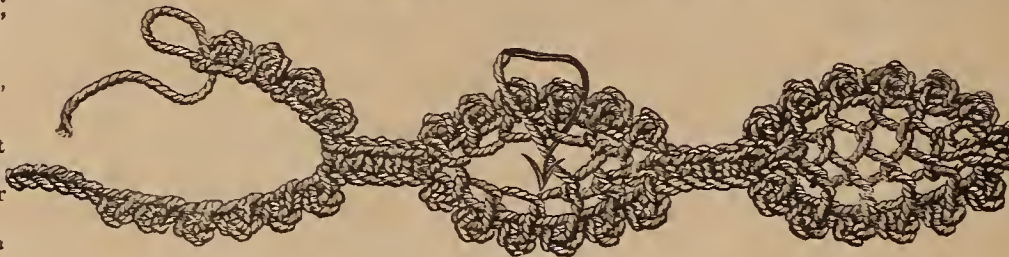
ROUND SHOULDERS.—Mothers are too often careless about the positions children assume in sitting, standing or lying down, and round shoulders is frequently the result. Children who grow very fast from ten to fifteen years of age, are very apt to contract a habit of stooping. Constant care is necessary to counteract the effect of stooping over a desk when writing, as children are required to write so much in their school work. Children ought to sleep on very small pillows. It is only habit that makes a large pillow comfortable for any one. An excellent physician recommends that those who have round shoulders should sleep without any pillow, and lie on the back as much as possible. It is also recommended that the patient recline during the day, with the face downward and the upper part of the body resting on the elbows. This is a favorite position with many children when reading or playing on the floor, and ought to be encouraged.

DRESS-SKIRT SUPPORT.—Where dress-skirts are separate from the waist, they are often heavy and uncomfortable unless supported in some way. A very good plan is to attach short strips of strong cloth to the seams of the waist about an inch and a half above the waist line. Work a button-hole in the end of each

strip and put a corresponding number of large, flat buttons on the band of the skirt and button them together. This not only supports the skirt, but holds the waist down nicely.
MAIDA McL.

CROCHET MIGNARDISE.

This pretty trimming can be readily wrought of coarse, black silk thread and used as a trimming on bright-colored cashmere for children's clothes, or on bright flannel waists or sacques. To begin it, make a chain of four, then three more, then bring those three back and fasten it in the fourth stitch, as a picot; chain three again and fasten back in the same way. Make six picots, then chain six and begin to make six more picots. One edge is done



CROCHET MIGNARDISE.

at a time. As you go back and make the top row, fasten each ring of picots along the plain chain stitches, forming a neck between the links. When you have sufficient length of rings, fill in the centers with needlework.
BETTINA HOLLS.

POP-CORN.

Lives there a boy or girl, young or old, who doesn't look for a nickel when the little vender comes along who advertises his wares by crying, "Fresh-buttered pop-corn; five cents a sack?" Now, this is one of the many things that country boys and girls may have if they will only prepare it. Pop-corn is so easily grown that most farmers may have a good supply if they will.

This fresh-buttered pop-corn is simply delicious. Have you a popper? If you haven't, you lose lots of enjoyment, for it is real fun to pop corn in one of them, and corn pops so much better in a popper, too. After you have all the corn you want popped, put it in a deep pan and warm a tablespoon level full of butter to every gallon of pop-corn. Pour the butter over the corn, and stir all together. Sprinkle the corn with salt, and stir it again. After a few trials you will be able to make it a success. Meat fryings will be found just as palatable as butter—more so to some people. Pop-corn balls are as easily made. Boil your sirup until it hardens in cold water, then pour it over the popped corn. Butter your hands and work the corn into balls. Here again practice makes perfect.
ELZA RENAN.

ROMAN SILK.

This beautiful material, which comes at one dollar and a quarter per yard, is very



ROMAN SILK SKIRT AND APRON.

much used for aprons, throws, and also for skirts. A pretty apron is always an addition to any lady's dress, and silk ones are worn for dressy ones. They do not soil easily, and are very readily laundered when they are soiled, if they are washed in soap-bark water, or strong borax water. Any of the colors will stand this.
C. I.

CHRISTMAS.

"So now is come our joyfulest feast,
Let every man be jolly;
Each room with ivy leaves is dressed,
And every post with holly."

Thus sang a happy poet two hundred and fifty years ago. There are some things which never grow old—lilacs in the spring time and holly at Christmas. But holly doesn't grow everywhere; and although in cities it can be bought at the florists', there are many persons with neither the florist nor money convenient.

Well, well! dream of holly, then, and take the next best thing. The idea is to bring together, as much as possible, the beauties of all seasons—the blaze, the cheer of winter fire, the odor and greenery of

summer woods. Christmas means the best of everything—memory of months past rich in blessings, hope of even better things, and rejoicing in a present of goodwill to everybody.

If one thinks of Christmas in July and August (and most of us do), it is a happy forethought to gather mosses, leaves and berries that can be preserved. One of the prettiest houses I ever saw decorated at Christmas time owed its beauty to various arrangements of pressed, trailing ferns. One of the ladies of the family had gathered them during her summer outing. I remember they were so beautiful and precious that they were put away after the festival, to be brought out on some future occasion. My taste in decorations is for something so simple, inexpensive and home-made, that it can be used without stint. If, by rare luck, there is found a bunch of mistletoe, by all means hang it where all the girls, young and old, pretty or plain, may get a Christmas kiss. For the wreaths that should hang in every window, use what is abundant. The different varieties of cedar can always be had, and nothing yields a smell more sweet and woody.

THE CHURCH

must of course be decorated. This beautiful custom, which has existed time out of mind among the Roman Catholic and Episcopalian people, is becoming a habit in all other churches. And now this is the very time to exercise the spiritual grace which Christmas celebrates. Oh, what a shame it is that even church festivals are sometimes the occasion of bickering and back-biting! One of the sweetest scenes that Mrs. Stowe drew in "My Wife and I," is where Eva Van Arsedale and Harry Henderson, in the Episcopal chapel, twine wreaths for the sweetly solemn holiday, and looking in each other's eyes, find a responsive look of love. Harry, in spite of his elevated, religious mood, committed a theft; he stole Eva's glove, and she saw him do it! Well, better such scenes in a church than grumbling and gossip. So let the posts be twined with holly, ivy, or such green as grows; let the altar flame with gas jets, proclaiming "good-will to men," or let a simple, homely text in verdant letters tell the good news. The real glory of the place will be the kindly human spirit behind it all. Crosses will be on wall and pulpit, perhaps of glistening green leaves, perhaps dazzling with pure white lilies; no matter, so long as each beholder feels that the greatest beauty of the cross is its meaning—unselfishness.

What is it which demands more attention than any other one feature of our yearly interests?

CHRISTMAS GIFTS.

There is often a great deal of nonsense mixed up with generosity and other fine human qualities. In regard to "exchanging" Christmas gifts, the nonsense predominates. Did you ever hear of ladies making bargains for this sort of exchange?

I am sorry to say I have, and sometimes the story ran that one or the other thought she had the worse of the bargain. How silly! Did she wish the better of it? This is too much the principle denounced in the parable where we are told not to bid our rich neighbors to a feast lest they also bid us again, and a recompense be made us; but we should "call the poor, the maimed, the lame, the blind."

"The children must, of course, have presents," we hear many a self-sacrificing mother say, and the result is often that the children are exacting and dissatisfied. The mother would have done better to teach them the blessedness of giving. There is a deep significance in the German custom which, on a child's birthday, sends him out with gifts for others.

The first persons on the list for Christmas presents should be the poor, self-supporting women who are, perhaps, in one's employ, and always in one's neighborhood. Be sure the washerwoman has a basket of edibles and some substantial articles of clothing. Another bit of thoughtfulness which has a double action in its kindness is to see if you can't buy some of the many gifts you will need from some person who manufactures them at home in circumstances of peculiar need. There are some women skillful in sewing, knitting or less homely arts, whose industry you can encourage by no sacrifice on your own part. Many a delicate woman, not able to earn her livelihood by hard, regular work, is capable at odd moments. Give thought to such. What could be better than a pair of silk mittens or a knitted rug bought from an aged or invalid woman.

There is no use trying to get something entirely unheard of. One of the favorite fashions is to make gifts of photographs. These may be combined with something else, as one fastened in the top of a glove-box, or it may be encased in a frame or other receptacle. Chamois skin is much used for making frames. It can be so easily sewed over cardboard, and admits of being painted or embroidered. Last year I gave two sets of photographs of my home interior to friends. There were three views in each set, which gave a representation of the two sides of the parlor and of the dining-room. This seems to me a capital way to give one's real life to a friend. I know of nothing that would interest me more than a friend photographed with some characteristic surroundings.

Shopping-bags, scrap-bags to hang at the end of the sewing machine, and traveling-bags of heavy linen, are all useful presents.

Perhaps some may laugh when I suggest "holders," as I call them, to keep from burning one's hand on the hot tea-pot handle, to use around the grate or kitchen fire. Last winter a friend made some of pieces of quilted, seal-brown satin (bits left from a jacket lining). She bound the edge with cardinal ribbon, and put a loop at one corner to hang it up. It gave the mantel an expression of coziness that had a touch of coquetry. I liked to look at it as well as use it.

A gift is always of value proportionate to the want it fills and the spirit in which it is given; so rules and suggestions are of little value. To one utterly at his wits' end concerning an appropriate present, I should say, send a year's subscription of some periodical. Yes, young man, to your sweetheart, some literary or art journal; to your mother, one of the numerous good home papers, which, indeed, suit all the family; to your father one that combines news, agriculture, stories and fun. Finally,

THE DINNER.

Not particularly the bill of fare, but the spirit in which it is prepared and eaten. If the cook is mother, as is generally the case, it will be nice to see that she has all possible help, so that she may not be too tired and worried to enjoy the dinner when it is on the table. With merry hearts and healthful appetites, a plain, bounteous repast is a feast—yes, even a "dinner of herbs" is good "where love is."

KATE KAUFFMAN.

WHEN THE LIVER FAILS TO ACT, and you are bilious, and out of sorts, use Dr. Jayne's Sensitive Pills to bring about a healthy action of the Liver, and remove all distressing symptoms.

TEA-POT HANDLE-HOLDER.

Material, two contrasting colors of single zephyr or Germantown wool, and two coarse, steel needles.

Cast on sixty stitches, on one needle, knit across plain.

Second row—Knit ten stitches for end stitches, then eight of the other color and eight of the first color, alternating the colors till within ten stitches of the end; knit same color as first end. When changing from one color to another, keep all the threads on the wrong side, and draw them quite tight across to make it puff. Continue till eight times across, then change colors. Knit until it is square, or nine blocks long; knit once



TEA-POT HANDLE-HOLDER.

across, then bind off. Draw the centers up tight at each end, and finish with a ribbon one inch wide, the color of one of the wools used; or, if preferred, a cord and tassel made of the two colors. If liked, it can be knit in stripes instead of block.

JANETT.

DOUGHNUTS.

Heat a pint of milk lukewarm, and stir into it a small cup of melted lard and sifted flour till it is a thick batter; add a small cup of domestic yeast, or an yeast cake dissolved in a cup of warm water. Keep warm till the batter is light, and then work into it two beaten eggs, two cups of sugar, a teaspoonful of salt and two teaspoonfuls of cinnamon. When the whole is well mixed, knead in wheat flour till about as stiff as biscuit dough. Set where it will keep warm till of a spongy lightness, then roll the dough out half an inch thick and cut it into cakes; lay them on a tin in a warm place till light, and fry in hot lard. Have a bowl of sugar ready, and as they get done, roll them over in the sugar till they are nicely covered, and lay them on a plate till cool, when they can be put away in a crock.

I generally set the yeast in the evening, and by morning it is ready for the sugar and seasoning. It takes longer for doughnuts to fry through than the fried cakes, and I do not think the lard requires to be quite as hot. A doughnut does not take up the lard very much. If one has any trouble, just beat up the white of an egg and roll the dough in it just before it is dropped in the kettle. This will also prevent fried cakes from taking up the grease, as they often do. The white of one egg is sufficient, as the cake only needs to be rolled in the froth, and all surplus adhering scraped back.

TOPSY.

WHAT SHALL WE MAKE FOR CHRISTMAS?

Yes, dear friends, what shall we make? It is high time to think and to set to work, for the dear old holiday is coming so fast that already we hear the rustle of expectancy in the air. Christmas gladness is coming in the faces of the children, and older heads are planning gifts, here, there, and everywhere, all over the world. I'll tell you some of the pretty things we are making.

A new and popular thing is the

KNITTING SQUARE

instead of the fancy knitting apron. The simplest of these is made of Swiss muslin, twenty-seven inches square, including a hem one and a half inches wide. Trim all around with pretty lace.

In the two diagonal corners place a pretty bow of ribbon, with a long end.

When not in use, lay the knitting inside, fold the corners, without the ribbon, together over the knitting, draw those with ribbon close, and tie. It is folded in this way when sent as a gift.

A more elaborate one is made of nan-sook muslin, about the corresponding width of hem, edged with lace, as above. This has a spray of wild roses painted in one corner. In the opposite corner, not diagonal, the initials of the owner are embroidered in pink. In the two other corners there is a bow of ribbon, each with a long end, used for trimming loosely around the waist to hold in place.

A third was of linen, embroidered in each corner with wash silks. In one a cluster of buttercups, another of daisies, third have bells, fourth, sweet peas.

Now, something for the children; we are all interested in that—an unbreakable and never-wearying toy.

CHILD'S ZEPHYR BALL.

Use zephyr or Saxony yarn. Cast on 30 stitches. Knit 20, turn, knit the 10 center stitches, turn, knit 11, turn, knit 12, turn, knit 13, turn, continue turning and knitting 1 more back and forth each time until the 30 stitches are all knit, then join on another color; knit in the same manner. When you have 4 stripes of each color, 8 in all, bind off, fill with cotton and sew up. They can be made to rattle by putting a small box inside, filled with stones. Orange and black or scarlet and black make a very pretty ball. But the most effective we ever saw was made of stripes in this way: Orange, blue, black and red.

Another very pretty ball is formed of pink and gray stripes, alternately.

A very pretty Christmas gift is a set of

FINGER-BOWL DOYLIES.

These are made of finest linen, seven inches square. Draw a thread three quarters of an inch from the edge, all around the square. Instead of hemstitching as formerly, they whip this with cotton, 110, as neatly as possible. This inch and a quarter must not be fringed out until the embroidery is finished.

The set to which I refer was embroidered in what is now termed shades of white. The designs were all floral: Pinks, pansies, convolvulus, daisies, etc. When finished and fringed, dampen well, press on the wrong side on flannel. These were the most exquisite I ever saw.

The newest "lunch doylie" is made of linen, about fifty cents per yard, cut into squares of fifteen inches; fringe as above.

Fold in a square and then diagonally; this doylie is embroidered only in one corner, filling the diagonal fold. This was done in outline stitch, with a few leaves in solid embroidery. Wash silks were used, and the natural colors of flowers. One set was embroidered in small fruits, blackberries, currants, etc.; the other set in flowers.

Now, something else for the children. The dollies are always needing clothes. Here is a garment for mother dolly and one for the baby. These Jersey sacques are cunning and dainty as possible, and I promise you they will prove a most acceptable gift to any little one.

JERSEY SACQUE FOR DOLLY NO. 1.

Set up 50 stitches. Knit 34 plain rows. Add 23 stitches at both ends for sleeves. Knit 15 rows for sleeves. Bind off 18 stitches for neck and knit 4 rows. Cast on 4 stitches for the front of sacque and knit 15 rows. Bind off 23 stitches and knit 34 rows. The border and collar are in colors.

For collar and sleeves, knit 12 rows; for border of sacque, 10 rows. For collar, take up stitches on the sacque, including border, knit 2 rows plain, and a row of holes. These are made by knitting 2 plain, then throw the thread over twice, knit 2 together, etc.

JERSEY SACQUE FOR DOLL NO. 2.

Set up 40 stitches. Knit 30 rows. Cast on 20 stitches for sleeves. Knit 13 rows. Bind off 16 stitches for the neck. Knit 4 rows. Cast on 4 stitches, neck. Knit 13 rows. Bind off 20 stitches. Knit 30 rows.

For collar and sleeves, knit 10 rows; for the border, 8 rows.

For the collar, knit 2 rows plain and then a row of holes, through which run ribbon.

Making the holes for the neck: Knit 2 plain, then throw the yarn over twice. Knit 2 stitches together, etc., till the end.

A most useful and always acceptable gift is the

COMBING TOWEL.

This may be cheap or expensive, as may please, according to the towel you select. This one had fringed ends, and cost fifty cents.

Fold over one third of the length of the towel. In the center of this fold cut out the hollow for the neck, deepening it in front to fit the neck. The short end is for the back. Open all the way down the center of the back. Finish the neck by button-holing, scallops, or points. Narrow hem on the slit at the back, ribbon to tie, color to suit the fancy.

This may be made a very handsome gift by using an embroidered towel.

I presume you have the knitting and sewing apron so much in use; if not, I will tell you in my next.

Wish you all a "Merry Christmas."

HOPE HOLIDAY.

BOOK LIST.

As many mothers have asked for names of books to purchase for their children, I will submit the following list as a partial help: For those just beginning to take an interest in reading, Jacob Abbott's *Frankonia Stories*; *Bed-time Stories*, by Louise Chandler Moulton; *Harper's Story Books*, by Abbott; *Laboulaye's Fairy Book*, translated by Mary L. Booth; *Little Sunshine's Holiday*, *The Cousin from India*, *An Only Sister*, by Miss Malock; *Little Lord Fauntleroy*, *Sara Crewe*, by Mrs. Burnett; *Work*, *Little Men*, *Little Women*, *Silver Pitchers*, *An Old Fashioned Girl*, by Miss Alcott.

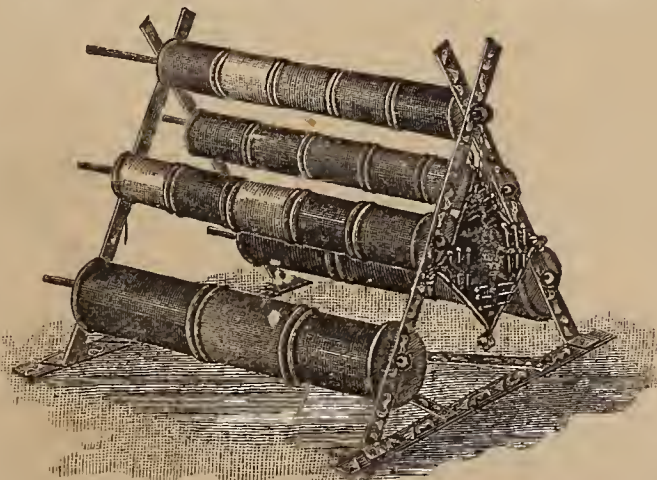
For an older child, there are the *Zig-Zag* series, any one of which are beautiful reading. *Sophie May's* books are also pure and sweet throughout. At this time the stores will be selling many nice books from twenty-five cents to one dollar that would be a great source of pleasure to any one fond of reading.

For many children, a magazine that will come through the year will make the joy more lasting. Of these we should give the preference to *The Youth's Companion*, *Harper's Young People*, *Wide Awake*, *Our Little Ones*, *St. Nicholas*. I do not see how a houseful of children get along without some one of them. The expense is trifling, compared with the instruction, pleasure and education that well-selected reading matter affords. Cur-tail other expenses than this.

BETTINA H.

A COTTON-REEL HOLDER.

The cotton-reel holder in the accompanying illustration is the invention of a diligent worker, who greatly praises its



COTTON-REEL HOLDER.

utility. She also specially recommends it for keeping loose silks (filosel, floss, sewing silk), as well as the various sorts of gold thread, cords, etc., in good order. The holder prevents their getting either rough or entangled, advantages which every needlewoman will easily appreciate and understand. It is made of strong, brass rods; the lower one serving as foundation is between eight and nine inches long by three fourths inch broad, and is joined by two cross bars about the same length, but rather narrower, and provided with corresponding holes. The brass wires intended to hold the reels go through these holes, and end in a sort of hook.

CINNAMON ROLLS, ETC.

To those who must put up frequent lunches, these rolls will be found a great relish and a desirable change from bread and biscuit. Take half the quantity of a loaf of light bread dough, roll it out till about half an inch thick (less is better), butter it, sprinkle with powdered sugar and cinnamon. Roll up like jelly-roll, and cut slices from the end about an inch thick; place these flat in a greased pan, and set to rise; when light enough, bake like biscuit about the same length of time.

Another kind is to roll out bread dough the same as for these, cover with black-berry jam, canned cherries or raspberry jam; place another layer of dough over the jam the same thickness as the under one, then cut out in cakes with a biscuit cutter. Let them rise about twenty minutes, and bake.

The piece of your pie dough, baked in tart-pans and kept in a stone crock, covered, will make a nice lunch, filled with cranberries or jam.

I always thought our cranberry pie the best I ever ate anywhere. We made a flaky pie dough, rolled it thin, spread it with butter and then folded it over and passed the rolling-pin over it again, not making it too thin. We baked them in saucers, and served each person half a one filled with cranberries. We cooked our berries till they were like jelly, not straining them as some do, and always used the best of white sugar to cook them with. You will be surprised at the difference in taste. Use only a porcelain kettle to cook them in—never tin, and mash them all well before putting in the sugar. They should cook nearly an hour over a slow fire.

CHRISTIE IRVING.

CONTRIBUTED RECIPES.

TURNIPS, FRIED.—Peel and slice thin, then put in the frying-pan with two or three spoonfuls of meat gravy, salt and pepper to the taste, cover tight and fry slowly, or if in a hurry so they can't steam tender, add a spoonful or so of water occasionally as you stir them, cook until tender and browned a light brown. I never could hardly eat boiled turnips, but I must say the first time I ate them cooked this way they were so good they spoiled my relish for the rest of my dinner. My niece cooks her sweet potatoes the same way. Dear editor, please have some turnips served this way for your own table, and see for yourself.

Howard, Kan. AN OLD SUBSCRIBER.

CHRISTMAS CAKES.—All of my friends pronounce them unexcelled and the little folks think there is nothing like them. Take

- 4 pints of Orleans molasses.
- 3 pints of shortening,
- 1½ pints of sugar,
- 4 tablespoonfuls of ground cinnamon,
- 2 tablespoonfuls of ground coriander seed,
- 2 tablespoonfuls of ground orange peel,
- 1 tablespoonful of ground allspice,
- 1 tablespoonful of ground cloves,
- 1 teaspoonful of soda dissolved in a little vinegar,
- ½ teaspoonful each of salt and black pepper.

Warm the molasses, add the shortening, then the spices and flour to stiffen enough to roll. Let the dough stand for four or five days in a cool place, then roll thin and

cut out with fancy cutters and bake in a moderate oven. They should be baked several weeks before Christmas, as they improve with age.

MRS. M. S. Z.

Hope, Ind.

CHRISTMAS PRESENTS IN SEA-SHELL PINS.

For only 50 cents I will send, postpaid, 9 of those lovely pink-tinted, pond-lily sea-shell collar pins. MRS. F. A. WARNER, East Saginaw, Michigan.



CHANCE FOR ALL

TO ENJOY A CUP OF PERFECT TEA. SPECIAL.—We will send by mail a TRIAL ORDER of 3½ lbs. on receipt of \$2.00. Name the kind of tea you are accustomed to using. Greatest inducement ever offered. THE GREAT AMERICAN TEA CO. P.O. Box 293. 31 & 33 Vesey St., N. Y.

Our Household.

CHRISTMAS DECORATIONS.

THE proper Christmas flowers are white and red roses, or white and red chrysanthemums; the latter can be secured by pinching the buds in early autumn to keep back the blossoms, and transferring the plants to a cool room before the frosts come. The large, white chrysanthemums are very pure-looking and appropriate for church decorations, and when red roses are to be had, they will mingle very harmoniously.

If neither roses nor chrysanthemums are available, everlasting flowers will answer the purpose; and as these, although dry, are natural products, they do not seem out of place. The small flower known to country people as white weed, or life-everlasting, is very pretty in crosses, stars or letters, especially on a scarlet or crimson ground. The globe-amaranth, or bachelor's button, in white or purplish crimson, can be used with very good effect in the absence of fresh flowers.

White cotton batting, when the effect has to be seen from a distance, makes very ornamental lettering. The letter or device is cut from a thick, white paper, and an even piece of the cotton batting is then pasted over it. When quite stiff and dry, the wool is cut to the exact shape of the paper, taking care to make the angles sharp and the edges even and straight.

The effect of rich embroidery can be produced by covering a shape of cardboard with the very coarsest straw used in making bonnets. It should be sewed around the outside edges first to secure a correct outline; the remainder is then filled in by degrees, so that the middle row has a raised appearance.

Rice-work, when well done, is like carved ivory. The foundation of cardboard is first tacked in place and then covered with a coat of thick, warm paste. The rice grains are dropped on this, and arranged so as to lie closely and regularly together; when stiff and dry, the ornamentation is complete.

Ferns are particularly desirable as a background and foil to autumn leaves. Sprays and branches of bright-tinted leaves mixed with long ferns have a beautiful effect in corners or over pictures; and in the former case tall vases are sometimes placed on the floor and filled with leaves, ferns and the different grasses, so arranged, with the help of stout wires, as to nearly reach the ceiling.

Single leaves with Florida moss make a very nice frieze. Get up on a step-ladder and make an irregular fringe of moss all around the room. Take ferns of all tints, and make large, round bunches. Put these at regular spaces; then take a spool of cotton and single leaves and ferns and fasten them into long garlands, with a slip-knot around each stem. Do not join them closely or regularly. Have some a few inches apart, and select leaves and ferns of all kinds, shapes and tints. Then mount the ladder and hang your garlands. If this is done artistically it will look much like a drift of falling leaves, for the white thread won't show, of course, and the leaves will look as if falling in mid-air. If you have lace or muslin curtains, fasten small branches of light leaves or a fern downward on one curtain. This arrangement is prettiest in a room where there are no pictures.

Fan-like bunches of large, dark-green ferns flat upon the wall behind a Parian statuette, will throw out the latter to great advantage, proving even a better background than velvet or plush.

Artificial berries, even gilded ones, are not to be despised, the latter giving a look of extreme richness by way of finishing touches. Very pretty, white berries can be made by wetting any dry berries or seed vessels, and then dipping them in flour. Brilliant scarlet berries are produced by dipping in melted sealing-wax.

LOOK HERE, FRIEND, ARE YOU SICK?

Do you suffer from Dyspepsia, Indigestion, Sour Stomach, Liver Complaint, Nervousness, Lost Appetite, Biliousness, Exhaustion or Tired Feeling, Pains in Chest or Lungs, Dry Cough, Night sweats or any form of Consumption? If so, send to Prof. Hart, 88 Warren St., New York, who will send you free, by mail, a bottle of *Floralplexion*, which is a sure cure. Send to-day.

ALWAYS IN THE LEAD.

PRUDENT and economical housekeepers desire labor-saving and time-saving household implements, and it may be needless to add, the wise farmer and alert butcher should always be on the lookout for similar efficient and what might be called *life-prolonging machines*.

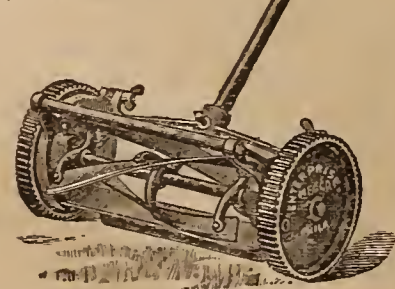
The popularity of the goods made by the Enterprise Mfg Co., Philadelphia (whose advertisement may be found on the last page of this issue), is the well earned appreciation of good goods, and the above company seems tireless in improving all articles they manufacture.



The most recent example of this is their now famous Meat Choppers, in use throughout the world. We refer especially to their family size, or No. 10 Meat Chopper, whose excellent work may be known to many of our readers.

To recall the action of the machine:—A spiral forcing screw pushes the meat to the end of the chopper, at which point it comes in contact with a perforated plate against which a four-bladed knife revolves. The meat naturally tries to get out, but cannot in consequence of the smallness of the holes in the plate, and just at this instant the revolving four-bladed knife cuts the meat like the snipping process of a pair of scissors, thus permitting the cut meat to pass through the plate. It is evident that if the holes in the plate are of large diameter, the meat will be cut in large pieces; if, on the other hand, the holes are small, the chopping will be fine, so that, by supplying plates with a variety of sizes of holes we will have proportionate degrees of chopping. This plate has been made of cast steel heretofore, and a certain limit in the number of holes in the plate, once obtained, could not be exceeded. The plate, as now improved, is made of drop forged steel, and all the holes are drilled, permitting nearly double the number of holes which were in the old plate. It thus may be easily explained why the Chopper containing the improved plate will chop finer, faster and easier than heretofore.

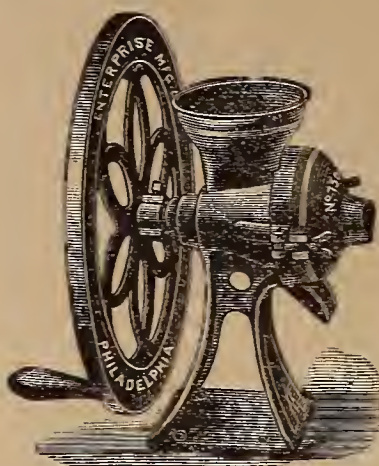
The Enterprise Sausage Stuffers may be used not only for sausage stuffing, but for pressing lard, and are unexcelled for butchers' and farmers' use. They are very durable and easy working machines, and will also be found useful for pressing fruit. In the latter case the perforated cylinder and bottom (as shown in il-



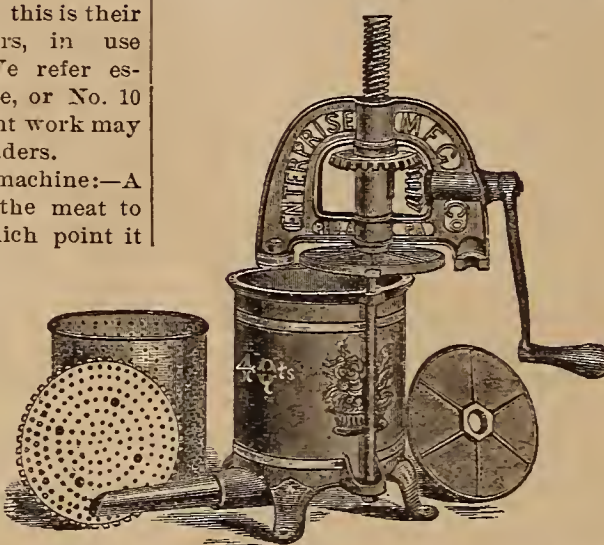
lustration) are to be placed in the press, and a cloth or bag should be used to prevent the pulp or seeds from passing through the holes in the strainer.

Improvements in their standard goods do not occupy the Enterprise Co.'s time

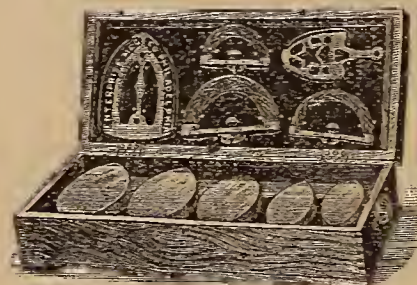
sufficiently to prevent their adding new goods to their list of specialties, and the "Family Outfit of Mrs. Potts' Cold Handle Sad Irons" is one of the neatest and most convenient arrangements for the tidy housekeeper one could well find anywhere.



It is scarcely a year since being first placed on the market, and the way it has taken at the start augurs well for its continued hold upon public favor. As a Christmas Present it is hard to excel, especially where the usefulness of the present is taken into consideration, and containing a complete set of Mrs. Potts' Sad Irons (3 Irons, Handle and Stand), a Girls' Iron and a Polishing-Iron, its complete-

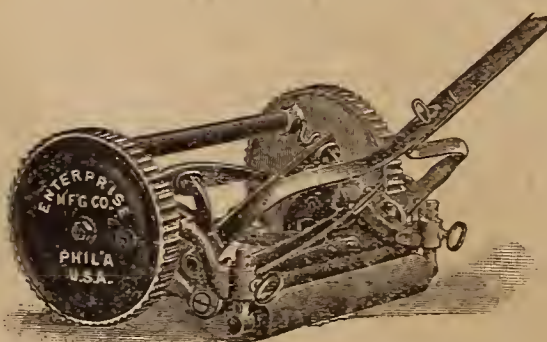


ness is evident. The price of the case is \$5.50 or \$4.75, according to whether the irons are nickel-plated or plain polished.



Among their recent specialties, the Enterprise Co.'s two styles of Lawn Mowers deserve a prominent place. The '87 mower, so called because first made in 1887, is fully equal if not superior to other makes of a similar class. Its weight is as little as is consistent with the strength of its various parts, and its simplicity of construction and ease of adjustment renders it a most efficient machine.

The '89 (first made in this year) is unlike the '87 by reason of its being a rear cutting machine, while the latter might be designated a forward cutting machine. It is well made in all particulars, has a guiding roller in back, and



a convenient and simple way of adjusting the same. For further information concerning these mowers (lack of space preventing our referring any more at length to their good points) we would advise our readers to send for one of the Enter-

prise Co.'s Catalogues. A postal card sent to Third and Dauphin Sts., Philadelphia, will be promptly attended to.

It is probably well known to our rural readers that bone meal, ground shells, cracked corn, etc., are excellent for poultry. The Mill shown in the illustration has been especially designed to grind bones, shells, corn, roots, bark, grain, chicken feed, etc., and when it is considered that pure, raw bone meal is one of the best fertilizers, its price, \$7.50, will prove one of the best investments for the farmer.

In conclusion, we will repeat what we have advised before—send to the Enterprise Mfg Co., Third and Dauphin Sts., Philadelphia, for one of its illustrated catalogues. A copy will be cheerfully mailed to any address upon application.



Having recently purchased the entire stock of watches of the bankrupt firm of Welden, Richards & Co., consisting of solid gold, silver, and gold-filled cases, we shall offer a portion of the entire lot at prices never before heard of in the Watch trade. Among the stock are 1,750 American Mate stem-winders, in solid gold-filled cases, which we shall sell singly or by the dozen to private parties or the trade at the unheard-of low price of \$3.50 each. Each and every watch is guaranteed a perfect time-keeper, and each watch is accompanied with our written guarantee for five years. Think of it! A genuine, Stem-winding, American Movement watch, in solid, gold-filled cases and guaranteed for five years, for \$3.50. Those wanting a first-class, reliable time-keeper, at about one-third retail price, should order at once. Watch speculators can make money by buying by the dozen to sell again.

Solid Gold Watches at \$3.50.
These watches must be sold, and as an inducement for you to order quickly, we will send to each of the first one hundred, ordering from this advertisement, a solid, 14k Gold Watch worth \$50, provided \$3.50 is sent with the order. Elegant, SOLID ROLLED GOLD CHAINS of the latest patterns, for \$1.00, \$2.00, \$3.00, and up. ORDER AT ONCE. Be one of the first and get a solid gold watch for \$3.50. All are stem-winding, equally finished, and guaranteed perfectly satisfactory in every way. Send money by registered letter or P. O. order at our risk. Watches and chains sent safely by registered mail to any address, provided 25 cents extra is sent to pay postage.
EUROPEAN WATCH CO.,
87 College Place, New York.
When you write, mention Farm and Fireside.

Grand Premium Offer

A HUNT FOR WEALTH

We are the publishers of a very popular 16 page, 64 column, illustrated home paper. In order to introduce it into new homes we make this **GRAND OFFER**. The person telling us the place in the Bible where the word **WEALTH** is first found (book, chapter and verse) before Jan. 15th, will receive a **Solid 14k. GOLD WATCH** ladies' or gent's size, stem winding, valued at \$100.00. Should there be more than one correct answer each of the next 50 persons will receive a handsome **PARLOR ROCKER**, same as we illustrate. The next fifty persons will each receive a beautiful **56 piece Tea Set**. The next five persons will each receive a splendid family **Sewing Machine**, valued at \$65 each. The next ten persons will each receive a set of fine quality single **Buggy Harness**. The next ten persons will each receive a handsome 14 karat, gold plated, **Shell Pattern Watch**, stem wind and set ladies' or gent's size. The next ten persons will each receive a fine double barreled, imported, **Breech-Loading Shot Gun**. The next one hundred persons will each receive a handsome decorated **Parlor Lamp**, valued at \$5 each. The next three persons will each receive a fine solid gold filled **American Watch**, ladies' or gent's size, stem wind and set, valued at \$50 each. With your answer enclose 25 cents (silver if you can or stamps) for which we will send you our charming paper each month for five months. We make this grand offer simply to advertise our paper and secure new subscribers. That's the reason why we give away these grand premiums, because we want new subscribers to our paper. We guarantee satisfaction or money refunded. A list of persons receiving these presents will be published in the February number of our paper. When you write mention this paper, and don't fail to enclose 25 cents for our paper five months. Address, **Kirtland Bros. & Co., P.O. Box 3340 N.Y.** Say you saw this in Farm and Fireside.

PRICE We Sell DIRECT to FAMILIES
PIANOS \$150 to \$1500
ORGANS \$35 to \$500.
Absolutely Perfect!
Sent for trial in your own home before you buy. Local Agents must sell inferior instruments or charge double what we ask. Catalogue FREE.
MAKIN & SMITH PIANO CO.,
235 East 21st St., N.Y.
Mention this paper.

Our Sunday Afternoon.

THE SECRET OF A HAPPY LIFE.

Just to let thy Father do
What He will;
Just to know that He is true
And he still;
Just to follow hour by hour
As He leadeth;
Just to draw the moment's power
As it needeth;
Just to trust Him—that is all.
Then the day will surely be
Peaceful, and whate'er befall,
Bright and blessed, calm and free.
Just to let Him speak to thee
Through His word;
Watching that His voice may be
Clearly heard;
Just to tell Him everything
As it rises;
And at once to Him to bring
All surprises;
Just to listen, and to stay
Where you cannot miss His voice—
That is all! And thus, to-day,
Communing, you shall rejoice.

MAKE HASTE.

SOME years ago, when traveling through Palestine, we were nearly benighted. We left Hebron in the morning, and had come leisurely along, passing through Bethlehem, and visiting the gardens of Solomon on the way. The sun began to get lower, we caught our first glance of Jerusalem, and on reaching the plain of Rephaim we had to increase our speed. Directly the sun set, and we saw a man come out from the Jaffa gate and stand upon a small hillock, shouting with all his might, as if forewarning of danger, and gesticulating wildly, as if to call our attention to what he was announcing.

"What is the man saying?" we asked our guide.

"He is shouting 'Yellah! Yellah!'"

"What does that mean?"

"Come along! Come along!"

We now found we were about to be shut out, and this messenger had come to warn us that the gate was about to be closed. We made haste, as we did not relish the thought of being kept all night outside the walls. We were just in time; no more. We entered and the gate closed behind us. "The door was shut." Matt. 25:10.

The lesson we learned was, "Make haste!"—a lesson which some of us never forgot. So near being shut out of the heavenly Jerusalem! What if we were to be not almost but altogether shut out of the heavenly city.

No time to lose! Too much lost already! A few days after a similar incident occurred which furnished another lesson. We had been wandering all afternoon on the Mount of Olives, not heeding the time. But at last we saw the sun going down. We hastened to the nearest gate, on the east side of the city. It was closed. There was no admittance. We hastened round the walls to the other gate, which we knew to be open a little longer. When we reached it we found ourselves excluded. We were told, however, that possibly the gatekeeper might relent and let us in. Alas! The key had gone to the governor.

What were we to do? It was suggested that a piece of silver might soften the guard's heart and bring the keys back again. So we thrust a suitable coin in a key-hole and waited. In a few moments the gate opened, we passed in. The bribe had prevailed. But our admission was against law.

The lesson for us was, "Be in time." The gate stands open. The way is plain. Lose not a moment. Upon one lost moment eternity hinges—"It is no trifle to lose eternity." Eternal joy, eternal sorrow—such is the alternative.—*The Wesleyan.*

SAVED BY KINDNESS.

We will call him Jim, for I do not remember his name. He had lost all his respectability, and was a common gutter drunkard. His family had disowned him and would not recognize him when they met him. Occasionally he would get a job at the stables where Dr. Davis kept his horse. One morning the doctor laid his hand on Jim's shoulder and said:

"Jim, I wish you would give up the drink."

There was something very like a quiver of the man's lips as he answered:

"If I thought you cared I would; but there is a great gulf between you and me."

"Have I made any gulf, Jim? Think a moment before you answer."

"No, you haven't."

"If you had been a millionaire, could I have treated you more like a gentleman?"

"No, you couldn't."

"I do care, Jim."

"Say it again, won't you?"

"I do care, Jim," with a tender little emphasis on the "Jim."

"Dr. Davis, I'll never touch another drop of liquor as long as I live. Here's my hand on it."

This was fifteen years ago; and "Jim" is to-day the respectable and respected Mr. —. Saved by a kind word! Will you make an effort this week to win some one by kindness?—*Christian Advocate.*

"AN EXCELLENT SPINE."

A Sunday-school teacher once called on one of his scholars to read the third verse of the sixth chapter of Daniel, from which the lesson was taken. The verse reads, "Then this Daniel was preferred before the presidents and princes, because an excellent spirit was in him. And the king sought to set him over the whole realm." The scholar, not being the best reader in the school, gave a slightly revised version of the text, as follows: "Then this Daniel was preferred before the presidents and princes, because an excellent spine was in him."

It is very likely that the revision produced a smile; but it also conveyed a lesson. A man without "an excellent spine" makes a very poor Christian, and would never "dare to be a Daniel," or "dare to stand alone." The little boy expressed just what many Christians need at the present day. There are some who are willing to sing, "Dare to be a Daniel, dare to stand alone," but they lack Daniel's "excellent spine," and so they will never be Daniels, and will not be likely to stand alone. May God raise up more men like Daniel; men who fear God and work righteousness; men of an excellent spine—men who have backbone.—*World's Crisis.*

KEEP AWAY.

The proprietor of a high-toned drinking saloon in New York signed the pledge and closed his dram-shop. On learning that a company of lads had organized themselves into a temperance society, he went to them, and gave them some of his experience as a rumrunner.

"I sold liquor," said he, "eleven years—long enough for me to see the beginning and end of its effect. I have seen a man take his first glass in my place and afterward find the grave of a suicide. I have seen man after man, wealthy and educated, come into my saloon who now cannot buy a dinner. I recall twenty customers, worth from one to five thousand dollars, who are now without money and without friends."

He warned the boys against entering the saloon upon any pretext. He said that he had seen a young fellow, a member of a temperance society, come in with a friend, and wait while he drank. "No, no," he would say, when asked to drink, "I never touch it." Presently, rather than seem churlish, he would take a glass of cider or harmless lemonade. "The lemonade was nothing," said he; "but I knew how it would end. The only safety, boys, for any one, no matter how strong his resolutions, is outside the door of the saloon."

Sydney Smith says: "Never teach false morality. How exquisitely absurd to teach a girl that beauty is of no value, dress of no use! Beauty is of value, her whole prospects and happiness in life may depend upon a new gown or a becoming bonnet; if she has five grains of common sense she will find this out. The great thing is to teach her their proper value, and that there must be something better under her bonnet than a pretty face, for real happiness in life."

THE ANDRAL-BROCA DISCOVERY!

THE NEW METHOD OF HOME CURE FOR

CONSUMPTION

Catarrh, Bronchitis, Asthma and all Diseases of the Respiratory Organs.

In Europe the wonderful cures of Consumption and kindred diseases by the New ANDRAL-BROCA DISCOVERY are exciting the medical world. Endorsed by the Public Hospitals, and by 4300 attested cures of Consumption in 90 days. Consumptive death-rate at once reduced from 85 per cent. to less than 15 per cent., and Catarrh, Bronchitis, and Asthma quickly and certainly cured.

Not a Drug—Not a Specific—but a New Scientific Common-Sense Method of Home Treatment—Plain, Simple and Practical.

The Greatest Discovery in Modern Medicine. A certain and absolute cure. In three months more than ten thousand persons have realized its blessings. To prove the certain success of this New Method of Treatment, it is determined to furnish a Ten days' free trial of it to every sufferer. Remember, no charge whatever is made for this trial. You are simply asked to take it FREE, and try it for yourself. If, therefore, you suffer from Consumption, Catarrh, Bronchitis or Asthma, you should send at once for this ten days' FREE treatment. It may save your life. Give your name, address, express office, age, and full particulars of your disease, and you will receive FREE, the treatment suited to your case, with its full diagnosis, and a large illustrated 100-page book, THE NEW MEDICAL ADVANCE, which fully describes this great discovery. Please mention this paper. Address THE NEW MEDICAL ADVANCE, 62 East Fourth Street, CINCINNATI, OHIO.

Over a year ago our newspapers first noticed this wonderful discovery. The *Christian Index*, Dec. 22, says this mode of treatment is the result of the best thought of the medical profession of Europe, where its success is assured. The *Medical Journal* says it is the most important discovery in the history of medicine. The *New York Voice*, Dec. 3, The *Christian Advocate* and The *Express* state that the medical journals of Europe have been teeming with the wonderful cures the Andral-Broca Discovery is performing in the Hospitals of Berlin, Milan, Vienna and London.

Mention this paper.

IT WILL COST YOU NOTHING!

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We have accumulated a stock of our CELEBRATED \$75 ORGANS, and in order to make room for our Holiday Styles now building, we will sell them during the next 60 days for \$35, cash with order or \$37.50 cash after trial.

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100 TEA SETS GIVEN AWAY!

OUR COUNTRY HOME, a mammoth, 16 page illustrated paper, devoted to the interests of the farm and home, poultry, stories and a host of interesting matter written expressly for its columns by the best known writers in the land. We wish to introduce it into new homes, where it has not already been taken. We make this grand offer. Upon receipt of only 30 cents we will send our COUNTRY HOME, 3 months, and to every subscriber we will send, free and post-paid, 10 valuable books as follows.—No. 1, The Road to Wealth. A thoroughly practical work pointing out the way by which all may make money easily. No. 2, Among the Ruins. A novel by Mary Cecil Hay. No. 3, Blue Eyes and Golden Hair. A novel, by Annie Thomas. No. 4, The Cricket on the Hearth. A Christmas story, by Chas. Dickens. No. 5, Fair but False. A novel, by the author of Dora Thorne. No. 6, Clouds and Sunshine. A novel, by Chas. Reade. No. 7, A Woman's Secret. By Clara Augusta. No. 8, Rose Lodge. By Mrs. Henry Wood. No. 9, Mairn's Revenge. By H. Rider Haggard. No. 10, The Old Oaken Chest. By Sylvanus Cobb, Jr. Remember, we send the 10 books named above, also our charming paper for three months, on receipt of only 30 cents. 4 subscribers and 4 sets of books for \$1.00. This great offer is made to introduce OUR COUNTRY HOME to new subscribers. Satisfaction guaranteed or money refunded.

We will send, by express or freight, absolutely free, one of our beautiful 56 piece Jeweled Tea Sets, as illustrated here, to each of the first 100 persons answering our advertisement, and sending 30 cents for three months subscription to our paper and the ten books listed above. These lovely Tea Sets are full size, and would be cheap at \$15.00 per set. They are made from the best English ware. Each set is richly decorated in colors in tasteful leaf and flower patterns. The shapes are modern and artistic. The set consists of the following pieces—12 plates—usual size; 12 tea cups—Handled; 12 saucers to match; 1 large teapot with cover; 1 soup bowl; 1 large bread plate; 1 large cake plate; 1 cream pitcher; 1 sugar bowl with cover; 12 sauce dishes. We propose to give away this beautiful set simply to advertise our business. When you write don't fail to mention this paper. Address Our Country Home, (P. O. Box 3373), New York City, N. Y.

OUR GRAND PREMIUM.



10,000 AMERICAN STEM WINDING WATCHES FREE TO BE GIVEN

We will give 10,000 Stem Winding and Stem Setting American Watches FREE to those who will assist us in procuring new subscribers to our ILLUSTRATED MONTHLY. The accompanying illustration is an exact representation of the Watch to be given away. We will also send free to subscribers one of our American Stem Winders and Stem Setters. This ILLUSTRATED MONTHLY is a well-known literary and family paper, now in its eleventh year, and one of the most popular home papers published to day. Elegantly printed, and is handsomely illustrated. Its contributors are among the best. Every year it is our custom to give away some elegant premium, worth in itself many times the subscription price of the Monthly, in order to secure new subscribers, well knowing that once a subscriber you will always remain with us. WE WANT 100,000 NEW SUBSCRIBERS AT ONCE, and we want you to assist us in securing them. This year we offer this ELEGANT PREMIUM FREE. It has HUNTING CASES, Beautifully Engraved, and Gold Plated. Each one is carefully inspected, regulated and tested before leaving the factory.

HOW TO GET THE AMERICAN STEM WINDER FREE.—Send \$1.00 in Postal Note or Bill, for one year's subscription to our ILLUSTRATED MONTHLY, and we will forward it by mail, post-paid, with GOLD PLATED CHAIN AND CHARM. Remember, we charge you nothing for this premium, only charging the regular subscription price of the Monthly. Only one Watch will be sent into any one neighborhood, and this offer will hold good for SIXTY DAYS ONLY. Subscribe at once; no time to lose; they will go like hot cakes. Be first in the field and get a watch for nothing. As this handsome premium is intended solely to secure new subscribers, we will NOT SELL IT. We give it away, and the only way you can secure it is to send \$1.00 for one year's subscription, when it will be sent you safely packed by return mail.

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Selections.

THE NATIONAL FLOUR.

UPON the hill the golden rod,
With royal grace in every nod,
Salutes the sun, as far away
He heralds forth the joyous day.

Dainty in form, with perfume sweet,
Arbutus, in some cool retreat,
Expands her many graces rare,
And shuns the daylight's ruthless glare.

A dainty jewel richly set,
You find the modest violet;
Within some cool and shady grove
It welcomes those who chance to rove.

But on a crisp and frosty morn,
Who sees the griddle-cake with scorn?
Above them all its merits tower,
The good, old-fashioned buckwheat flour.
—Merchant Traveler.

MOUNTAIN HOMES.

THE French government has placed in the great exhibition at Paris a very interesting series of methods and plans for the restoration of waste lands, and particularly for the transformation of barren mountain-sides into fertile farms, by means of terraces, rising one above another. A lofty and barren mountain may, by these methods, be changed into a beautiful and fertile pyramid, encircled by scores of belts of narrow, green fields, watered from reservoirs placed near the summit.

Thus the waste and lonely mountain may become the home of a numerous population. In short, an entire great range like the Alleghanies, with hundreds on hundreds of peaks, can be converted into a chain of populous towns.

Those persons who, with Dr. Malthus, have feared that the earth may become over-peopled, would do well to study the capacities of mountain ranges, in the light of these recent French engineering enterprises.

For example, a mountain six thousand feet in height may be surrounded by a hundred terraces of stone work, each supporting level belts of fertile soil, one above another, varying in width from twenty yards upwards, according to the steepness of the mountain-side.

Water for irrigation is brought down in pipes from the reservoirs above, or hoisted by wind power or solar engines, from streams below.

Mountains thus "restored" offer most picturesque and healthy sites for homes upon the terraces, and the drainage and other sanitary works can easily be rendered almost perfect. Such improved mountain-sides, too, are capable of producing a very wide range of foods, from sub-tropical fruits at the base, or lower-most terraces, to the hardest of cereals and vegetables near the summit, and these products can be readily exchanged by the people on the different terraces, one with another.

Flights of steps and even inclined railways may lead upward from one stage of gardens to another, and it is easy to see how a single mountain, not very large and not very high, may become the prosperous home of a healthy, self-supporting population of many thousand people.
—Youth's Companion.

INGERSOLL'S EXPLANATION.

Here is the way Ingersoll puts it: "Here is a shoe shop. One man, in the shop is always busy through the day. In the evening he goes courting some nice girl. There are five other men in the shop that don't do any such thing. They spend half their working evenings in dissipation. The first young man, by and by, cuts out these others and gets a boot and shoe store of his own. Then he marries and is able to take his wife out riding. The five former companions, who see him indulging in this luxury, retire to a saloon and pass resolutions that there is an eternal struggle between labor and capital."

HOME STUDY. Book-keeping, Business Forms, Penmanship, Arithmetic, Short-hand, etc., thoroughly taught by MAIL. Circulars free. BRYANT & STRATTON'S 449 Main St., Buffalo, N.Y.

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For Weak Stomach—Impaired Digestion—Disordered Liver.

SOLD BY ALL DRUGGISTS.
PRICE 25 CENTS PER BOX.

Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England.
B. F. ALLEN & CO., Sole Agents
FOR UNITED STATES, 365 & 367 CANAL ST., NEW YORK,
Who (if your druggist does not keep them) will mail Beecham's Pills on receipt of price—but inquire first. (Please mention this paper.)

19 PHOTOS, only 10c. THURBER & CO., BAY SHORE, N. Y.

AGENTS wanted, \$1 an hour, 50 new articles. Catalogue and sample free. C. E. Marshall, Lockport, N. Y.

Rubber Stamps, Best made. Immense Catalogue free to agents. The G. A. Harper Mfg Co., Cleveland, O.

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LADY Agents \$10 a day SURE; new rubber undergarment. Mrs. H. F. LITTLE, Chicago, Ill.

AGENTS Wanted. Bottled Electricity pays \$50 a day. Ad. Box 443, Chicago, Ill.

THRILLING Detective Stories, 16 Complete love stories and 100 Popular Songs, 10 cents (silver). Ind. Nov. Co., Boylston, Ind.

\$10 a day agents wanted. Cat. Free; 65c. Sample by mail 25c. stamps. Horse owners buy 1 to 6. REIN HOLDER CO., Holly, Mich.

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BOYS Send us 6 cents in stamps and we will send you, by mail, an article you can have lots of fun with. P. O. WENOSKEY, Providence, R. I.

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WE CAN SHOW YOU HOW TO make \$100 per month. Just send for circulars. Cassgreen Mfg. Co., 79 W. Madison St., Chicago, Ill.

SONGS 100 Popular Songs, no 2 alike 10c; 300 for 25c; 600 for 50c; 1200 for \$1; 2500 all different for \$2. Catalogue Free. H. J. WEHMAN, 130 Park Row, N. Y.

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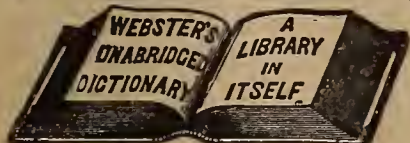
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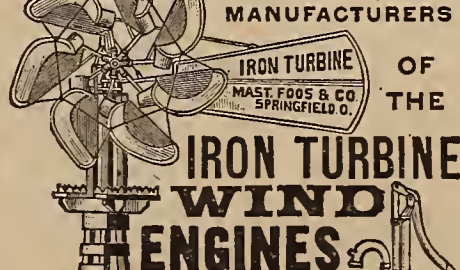
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Smiles.

He killed the noble Mudjokivis,
With the skin he made him mittens,
Made them with the fur side inside;
Made them with the skin side outside;
He to get the warm side inside,
Put the inside skin side outside;
He to get the cold side outside,
Put the warm side fur side inside;
That's why he put the fur side inside,
Why he put the skin side outside,
Why he turned them inside outside.

—Western Journalist.

EATING IN THE COUNTRY.

DID you ever eat a meal in the country? If you didn't, your life is painful for reason of the unfulfillment of its ends and aims. Did you ever go and upholster your works with the rich and oleaginous products of the country larder—either larder or buttery, I forget which; it doesn't make any odds.

I've had just one square meal in the last month, and that was when I went into the country to fill my emaciated viscera with agricultural grub and rural menoise. My mother accompanied me and both were accompanied by our large, adult appetites. Notwithstanding the disparagement of our ages, mother and I are almost chums when it comes to highway robbery on a table that is sighing under the weight of good things.

Contrary to the usual run of country people, the folks whose guests we were, were close, hard people. The old gentleman don't care any more for a dime than most people do for a large, red-headed daughter. He was stinging that after he had smoked a cigar clear down to a point where it made his moustache smoulder he used always to swallow the butt of the cigar so as to get all of it. One day he went and got his chin paved so that he wouldn't have to have it shaved—he could just hoe it off. That's the kind of a mau we dined with. The old mau was liberal in only one sense—he used to allow himself almost his entire income for stuff to put into his mouth and give his brain the razzle dazzle. He would get drunk on Monday and then get redrunk every day in the week. His autumnal nose was pictured in every color of the dying year and his breath used to break glasses when he vainly essayed to drink out of them. This was the brand of man around whose festal board and lodging we were congregated.

I shall never forget how his wife alternately used her apron for a handkerchief and then a dish-rag. I shall not soon cease to remember the time that the bread gave out, owing to the burly manner in which I had been coquetting with it. The lady of the house arose from the table with a weary sigh and went into the pantry. She returned a moment later with a large loaf of bread. My eyes danced in hungry anticipation. Then she placed it firmly against her stomach and commenced sawing through it toward herself with a big knife. She did not seem a bit afraid that she would make her dress taste bad by pressing the bread against it. She did not even pause to consider how it sharpened our prostrate appetites to see her fold the bread in her warm embrace and hug it while she stabbed it. As for myself, I was in agony lest the knife slip and cut a large, bleak hole in her assimilation of food. But she escaped injury and I ate gravy instead of bread.

EDGAR ALLAN MORGAN.

JOURNALISM UNDER DIFFICULTIES.

A Tennessee editor gives this account of the difficulties under which he labors.
"How is it that our readers expect us, out here twelve miles from a railroad, twenty-five miles from a river, millions of miles from heaven, about two miles from the devil and only two hundred yards from a whiskey shop, to get out a newsy, lively and interesting paper?"—*Mobile Register*.

WHAT SHE WORE.

Bloodgood—"Isn't Miss Debut a charming girl? By the way, did you notice what she wore at the last charity ball?"
Poseyboy—"Yes, she wore a flounced white satin skirt."
Bloodgood—"That's all."
Poseyboy—"No—an air of gayety and a smile."—*Burlington Free Press*.

'AN UNLUCKY MAN.

A—"Have you had any experience in love affairs?"
B—"Well, I should say I had. In love I am the unluckiest of mortals. All the girls that I loved, and even some that I hadn't begun to love yet, were gobbled up by other fellows and married."—*Texas Siftings*.

CATARRH CURED.

A clergyman, after years of suffering from that loathsome disease Catarrh, and vainly trying every known remedy, at last found a prescription which completely cured and saved him from death. Any sufferer from this dreadful disease sending a self-addressed stamped envelope to Prof. J. A. Lawrence, 88 Warren street, New York, will receive the recipe free of charge.

WHAT HE GOT BY IT.

"Come mighty nigh killin' a fine buck dis maw'nin'," said an old Negro. "Comln' 'long through de woods an' er ole buck he jump up an' bookerty, bookerty, he run off a few yards an' stop still. Come in one er shootiu' him, sah."

"Why didn't you shoot?"
"Didu' hab my gun wid me, sah."
"Then how did you come in one of shooting him?"

"Case, sah, I come in one o' takin' my gun wid me."

"Why didn't you take your gun?"

"Didu' hab none, sah."

"You are an old fool."

"Look heah, doan 'buse er man dat way when yer ain' got no cause. I ain't got no gun, fur a feller dat I wuz erbout ter buy one from axed me jest one dollar mo'n I could pay. So, I come in one o' gettin' de gun. Ef I had er got it, I would er tuck it 'long wid me, an' ef I'd er had it, I could er shot de buck easy, sah. So doan come 'roun' 'busin' er man when de facks is all ergin yer. I hab knowed folks to fetch trouble on dar'selves dat way. Er pusson oughter be keeful in dis heah worl' o' science an' speckerlation. Good maw'nin', sah. Since yer's acted dis way, I wouldenter gin yer none o' de meat ef I had er killed it. 'Fore yer talked dat way I woulder made yer present o' some o' de buck. See whut yer got by it, sah?"—*Arkansaw Traveler*.

LITTLE BITS.

Mabel—"Amy, what has become of your anti-slang society?"

Amy—"Oh, it's in the soup."

Tramp—"Can I get a drop from the old oaken bucket?"

Farmer—"No; but you'll git a drop from one of the staves if you come inside the yard."

Young medical student (to his sweetheart)—"Do you know, Julia, that the human heart is equal to the lifting of 120 pounds every twenty-four hours?"

Julia (demurely)—"Well, that's just my weight."

Then he lifted her to his heart.—*Texas Siftings*.

"Are you going to break off your engagement with Miss Prentice?" inquired Merritt. "I hear she will be a cripple for life through that railway accident."

"I intended to break it off at first," returned his friend, "but I have just heard that the company has offered her twenty thousand in settlement."—*The Epoch*.

"I must be very careful and not go too far with Mr. Longfellow; it may lead to disaster," said Carrie, half musing, to herself.

"Why so?" said Annie, who had just come up at the moment. "Has he proposed?"

"Oh, no; he merely asked me if I thought I could get along with two dresses a year."—*American Commercial Traveler*.

"Did you study political economy?" asked one traveling man of another.

"Yes, I've spent considerable time at it."

"And what is the result of your investigations?"

"Well, the best political economy is to stay out of politics. That's a tip that may save you money."—*Merchant Traveler*.

Pat and Mike, two verdant Irishmen from the "Old Sod," came across a drove of fine Berkshire hogs, while traversing a country road.

Not being well acquainted with American pork in its live state, Pat inquired of his friend:

"What might be the name of thim animals with the fat cheeks?"

With true Irish wit Mike replied:

"Faith and thim looks to me loike shaved shape wid the mumps."—*Life*.

An English scientist says that if we were to visit the moon, we should find the days and nights a fortnight in length, and if we "survived the ordeal" during the day, we should certainly be frozen to death during the ensuing night. That settles it. We shall not visit the moon. The climate is entirely different from any of the forty-seven varieties we sometimes experience here during the twenty-four hours, and it wouldn't agree with us. The English scientist does well to tell the truth about it, instead of trying to boom town lots on the moon.—*Norristown Herald*.

One evening a man, tall and spare, surrounded by a country atmosphere, cautiously approached the desk at Willard's Hotel and hesitatingly said that he wanted a room. Mr. Harris placed the register before him and handed him a pen.

"What's thier for?" inquired the would-be guest.

"Sign your name, please," was the reply.

"I've got a lady with me. It's my wife—we've just got married," was the faltering remark of the visitor.

"Then write both your names on the register," was the advice given.

An inspection a moment later revealed the following entry:

"Miss Jennie & me."



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Our Miscellany.

The soul, secure in her existence, smiles
At the drawn dagger, and defies its point;
The stars shall fade away, the sun himself
Grow dim with age, and nature sink in years;
But thou shalt flourish in immortal youth,
Unhurt amidst the war of elements,
The wreck of matter, and the crush of worlds.
—Addison.

PLAIN living and high thinking will make
better men than high living and slow think-
ing.

DON'T forget that the finest-feeling, velvety
paws of the kitten often cover the sharpest
claws.

NEVER dispute with a man more than
seventy years of age, nor a woman, nor an en-
thusiast.

GIVE me the liberty to know, to think, to
believe, and to utter freely, according to con-
science, above all other liberties.—*Millon.*

NINETY-NINE per cent of ambition to try,
and one per cent of talent, is all that is neces-
sary to success in whatever we undertake.

WOMEN are fascinating creatures, yet it is
sitting upon eggs all the time you are deal-
ing with them. They receive the unvarnished
truth as if it were a red hot bullet.

ONE strong, well-directed blow sends the
intruder to its home than do a dozen coaxing
words. One fit and earnest word carries more
weight than does a whole yard of high-flown
eloquence.

THERE are 7,000,000 Negroes in the United
States. In the South there are 16,000 colored
school teachers. They have colleges, univer-
sities and seminaries, and are worth \$2,000,000
in property.

DO not mournfully into the past; it comes
back again. Wisely improve the present;
go forth to meet the shadowy future
without fear and with a manly heart.—*Longfellow.*

FRENCH chemist believes himself able to
determine whether a soil is deficient in phosphorus,
ash or nitrogen by the shade of green of
the vegetation. The leaves become yellowish
when nitrogen is lacking.

MEASUREMENTS of a quarter of a million of
flowers have shown that males do not reach
maturity until about 28, and Prof. Shaler's ob-
servations at Harvard prove that full mental
power is not reached before 35.

TO keep the stove bright, a cloth should be
kept on purpose for rubbing it off. When
first on a newly-blackened stove the
cloth becomes filled with the surplus polish,
which rubs off so easily, and is then ready to
impart a gloss whenever it is needed. An-
other plan is to use old newspapers to rub off
the stove instead of a brush. In mixing
stove polish, use vinegar and a teaspoonful of
sugar. To brighten the nickel plating, rub it
with whiting and kerosene, using a woolen
cloth, or rubbing it with a woolen cloth and
oil. If the mica in the stove door has be-
come discolored by smoke, it can be easily
restored by washing it with vinegar.

THERE is no positive knowledge regarding
the origin of the American Indian, because
their own traditions vary widely, and the re-
searches made into the matter have not
proved as satisfactory as could be wished, a
great deal depending on conjecture. One of
the most plausible theories is that they origi-
nated with two great Asiatic races; the more
northern tribes on our continent from the
lighter Mongolians, who crossed at Behring's
strait, and the more southerly ones, in Cal-
ifornia, Central and South America, from the
darker Malays, who first peopled Polynesia.
In the south Pacific, and finally made their
way to the western continent, gradually
spreading over it from one great ocean to the
other. This theory is not based on any simi-
larity of languages with those of the Asiatics,
but the traditions of the Indians, their imple-
ments and their modes of life point to a close
relationship.

AN INTERESTING PLACE TO VISIT.

The cash-room of the treasury department
is an interesting place. It is one of the beau-
tiful rooms in the world, certainly the most
beautiful piece of architectural work in
Washington. The ceiling is very high, and
about midway between floor and ceiling there
is a balcony around the wall. It is of bronze.
Visitors always go to the cash-room and look
down upon their public servants handling
millions of gold, silver and greenbacks. The
paying tellers here deliver all of the money
which goes out of the treasury. The pay-
masters of the army and navy and the dis-
bursing officers of the other departments come
here and draw immensesums for disbursement
among the employees of the government. Here
any one and every one may come for change.
People go in throngs and form long lines in
the cash-room, waiting their turns, just before
Christmas, getting bright, new pennies by the
hundred for distribution among the children.
A little pocket-book filled with bright, new
coppers makes a very welcome Christmas
present for little boys and girls.

WHEN A FROG IS A BABY.

He is no frog at all, but a fish with gills and
tail, and is called a tadpole. Then he lives
altogether in the water. After awhile the gills
waste away and a pair of legs burst out of his
skin, and grow quite long. Then out burst
another and shorter pair, then the tail shrinks
away, a tongue comes, the lungs grow, and at
last our little friend has put off his brown
coat for a green one. He gives a hop and a
jump out of the water and is no longer a tad-
pole. When winter comes, froggie does not
go South, but he hides himself deep in the
mud at the bottom of the stream, and takes a
long nap—until spring has come around again.
Then he is bright and jolly as ever, and gives
his noisy concert every evening.—*Orange
Judd Farmer.*

"WE."

A well-known merchant once said: "I
would not give much for a boy who does not
say 'we' before he has been with us a fort-
night." The boy who says "we" identifies
himself with the concern. Its interests are
his. He sticks up for its credit and reputa-
tion. He takes pleasure in his work, and
hopes some day to say "we" in earnest. The
boy will reap what he sows if he keeps his
grit and sticks to his job. You may take off
your hat to him as one of the solid men of
the town. Let his employer do the fair thing
by him; check him kindly if he shows signs
of being too big for his place; counsel him as
to his habits and associates, and occasionally
show him a pleasant prospect of advance-
ment. A little praise does an honest boy a
heap of good. Good luck to the boy who
says "we."

THE SUNFLOWER.

Even those who pay no heed to the sunflow-
er's æsthetic beauty must admit its great eco-
nomic worth. The seeds of the great annual
sunflower yield a bland, nutritious oil, second
only to olive oil for domestic purposes, if not
quite equal thereto. The stalks of this plant
may also be used for fuel, and the ashes con-
tain a large amount of potash. In France the
leaves are gathered and fed to cows; and in
Portugal the seeds are made into a kind of
bread, just as in this country they are some-
times roasted and used as a substitute for cof-
fee. All the large grain-eating birds are fond
of sunflower seeds, and they have long been
employed for fattening domestic fowls. It is
even alleged that hens fed on them are more
prolific than when nourished on other kinds
of grain. An acre of rich soil will yield about
fifty bushels of seed, and each bushel one gal-
lon of oil, leaving about fifteen hundred
pounds of oil cake, which is an excellent feed
for cattle. Sunflower seeds are also used in
some countries of Europe like almonds, for
making demulcent and soothing preparations;
and a kind of broth is made from them as food
for infants. The flowers abound in honey and
are much frequented by bees; and in fact
every part of this plant has its economic prop-
erties and uses.

THE SWEET WORD "HOME."

Dr. Talmage pays the following tender trib-
ute to an ever welcome theme: "Home! It is
a charmed word. Through that one syllable
thrill untold melodies, the laughter of chil-
dren, the sound of well-known footsteps and
the voices of undying affection. Home! I
hear in that word the ripple of meadow brooks
in which, knee-deep, we waded; the lowing of
cattle coming up from the pasture, the sharp
hiss of the scythe amid thick grass, the creak-
ing of the hay-rack where we tramped down
the load. Home! Upon that word there drop
the sunshine of boyhood, and the shadow of
tender sorrows and the reflection of ten thou-
sand fond memories. Home!

"When I see it in book or newspaper that
word seems to rise and sparkle and leap and
thrill and whisper and chant and pray and
weep. It glitters like a shield. It springs up
like a fountain. It thrills like a song. It
twinkles like a star. It leaps like flame. It
grows like a sunset. It sings like an angel.
And if some lexicographer, urged on by a
spirit from beneath, should seek to cast forth
that word from the language, the children
would come forth and hide it under garlands
of wild flowers, and the wealthy would come
forth to cover it up with their diamonds and
pearls, and the kings would hide it under
their crowns, and after Herod had haunted its
life from Bethlehem to Egypt, and utterly
given up the search, some bright, warm day
it would flash from among the gems, and
breathe from among flowers, and toss among
the coronets, and the world would read it
bright and fair and beautiful and resonant as
before. Home! Home! Home!"

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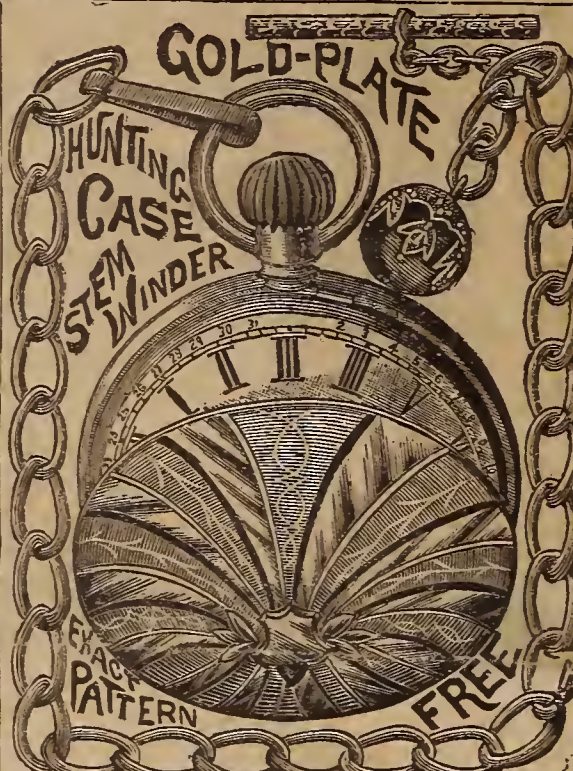
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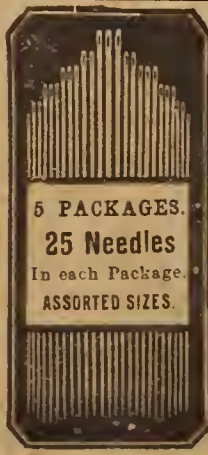
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